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JIDA

Journal of the Irish Dental Association
Iris Cumainn Déadach na hÉireann

Volume 67 Number 6
December 2021/January 2022

At last...

...something to smile about!

All the Colgate Caring Award winners 2021

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30% MORE EFFECTIVE FOR YOUR PATIENTS

References: 1. Merry A. et al. AFT-MX-1, a prospective parallel group, double-blind comparison of the analgesic effect of a combination of paracetamol and ibuprofen, paracetamol alone, or ibuprofen alone in patients with post-operative pain. Department of Anaesthesiology, University of Auckland, New Zealand 2008. *compared with the same daily dose of standard paracetamol or ibuprofen alone.

Easolief Duo 500 mg/150 mg film-coated tablets Each tablet contains paracetamol 500 mg and ibuprofen 150 mg. **Presentation:** A White, capsule shaped tablet with breakline on one side and plain on the other side. **Indications:** Short-term symptomatic treatment of mild to moderate pain. **Dosage: Adults/elderly:** The usual dosage is one to two tablets taken every six hours up to a maximum of six tablets in 24 hours. **Children:** Easolief Duo is contraindicated in children under 18 years. **Contraindications:** Severe heart failure, known hypersensitivity to paracetamol, ibuprofen, other NSAIDs or to any of the excipients, active alcoholism, asthma, urticaria, or allergic-type reactions after taking acetylsalicylic acid or other NSAIDs, history of gastrointestinal bleeding or perforation related to previous NSAID therapy, active or history of recurrent peptic ulceration/haemorrhage, severe hepatic failure or severe renal failure, cerebrovascular or other active bleeding, blood-formation disturbances, during the third trimester of pregnancy. **Warnings and precautions:** This medicine is for short term use and is not recommended for use beyond 3 days. Clinical studies suggest that use of ibuprofen, particularly at a high dose may be associated with a small increased risk of arterial thrombotic events. Patients with uncontrolled hypertension, congestive heart failure, established ischaemic heart disease, peripheral arterial disease and/or cerebrovascular disease should only be treated with ibuprofen after careful consideration and high doses should be avoided. Careful consideration should be exercised before initiating long-term treatment of patients with risk factors for cardiovascular events. The use of paracetamol at higher than recommended doses can lead to hepatotoxicity, hepatic failure and death. Patients with impaired liver function or a history of liver disease or who are on long term ibuprofen or paracetamol therapy should have hepatic function monitored at regular intervals. Severe hepatic reactions, including jaundice and cases of fatal hepatitis, though rare, have been reported with ibuprofen. Paracetamol can be used in patients with chronic renal disease without dosage adjustment. There is minimal risk of paracetamol toxicity in patients with moderate to severe renal failure. Caution should be used when initiating treatment with ibuprofen in patients with dehydration. The use of an ACE inhibiting drug, an anti-inflammatory drug and thiazide diuretic at the same time increases the risk of renal impairment. Blood dyscrasias have been rarely reported. Patients on long-term therapy with ibuprofen should have regular haematological monitoring. Like other NSAIDs, ibuprofen can inhibit platelet aggregation. GI bleeding, ulceration or perforation, which can be fatal, has been reported with all NSAIDs at anytime during treatment. Combination therapy with protective agents (e.g. misoprostol or proton pump inhibitors) should be considered. Use with concomitant NSAIDs including cyclooxygenase-2 selective inhibitors should be avoided. NSAIDs may lead to onset of new hypertension or worsening of pre-existing hypertension and patients taking antihypertensive medicines with NSAIDs may have an impaired anti-hypertensive response. Fluid retention and oedema have been observed in some patients taking NSAIDs. NSAIDs may very rarely cause serious cutaneous adverse events such as exfoliative dermatitis, toxic epidermal necrolysis and Stevens-Johnson syndrome. Products containing ibuprofen should not be administered to patients with acetylsalicylic acid sensitive asthma and should be used with caution in patients with pre-existing asthma. Adverse ophthalmological effects have been observed with NSAIDs. For products containing ibuprofen aseptic meningitis has been reported only rarely. NSAIDs may mask symptoms of infection and fever. **Interactions:** Warfarin, medicines to treat epilepsy, chloramphenicol, probenecid, zidovudine, medicines used to treat tuberculosis such as isoniazid, acetylsalicylic acid, other NSAIDs, medicines to treat high blood pressure or other heart conditions, diuretics, lithium, methotrexate, corticosteroids. Refer to summary of product characteristics for other interactions. **Fertility, pregnancy and lactation:** Easolief Duo is contraindicated during the third trimester of pregnancy. **Driving and operation of machinery:** Dizziness, drowsiness, fatigue and visual disturbances are possible after taking NSAIDs. If affected patients should not drive or operate machinery. **Undesirable effects:** Dizziness, headache, nervousness, tinnitus, oedema, fluid retention, abdominal pain, diarrhoea, dyspepsia, nausea, stomach discomfort, vomiting, flatulence, constipation, slight gastrointestinal blood loss, rash, pruritus, alanine aminotransferase increased, gamma-glutamyltransferase increased, abnormal liver function tests, blood creatinine increased and blood urea increased. Refer to Summary of Product Characteristics for other adverse effects. **Pack size:** 24 tablets. **Marketing authorisation holder**: Clonmel Healthcare Ltd., Clonmel, Co. Tipperary. Marketing authorisation number: PA0126/294/1. Medicinal product not subject to medical prescription. For retail sale through pharmacy only. A copy of the summary of product characteristics is available upon request. **Date prepared:** October 2019. 2019/ADV/EAS/117H.

CLONMEL HEALTHCARE

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MANAGING EDITOR **Ann-Marie Hardiman** ann-marie@thinkmedia.ie
EDITORIAL **Colm Quinn** colm@thinkmedia.ie
ADVERTISING **Paul O'Grady** paul@thinkmedia.ie
DESIGN/LAYOUT **Rebecca Bohan, Tony Byrne, Tom Cullen**

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- New VAT rules pose threat to dentistry
- Mandatory sick pay to be introduced in 2022
- Minimum wage to increase

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PROFESSIONAL ORAL HEALTH

EDITORIAL

Dr Ciara Scott
Honorary Editor

Celebration and change

As we move into 2022, the Association, and the *Journal*, continue to develop and move forward.

At last, something to celebrate!

It is a credit to Aoife Kavanagh, Elaine Hughes and all the organisers that the Colgate Caring Dentist and Dental Team Awards ran successfully again in December, as we continue to adapt to living with the pandemic. Many congratulations to all our nominees who joined us on the evening to celebrate our profession, and to our winners. Meaningful work is a key element of positive functioning in the workplace, and these Awards create the opportunity to celebrate this by sharing stories and building social connectedness, core factors for workplace well-being. In this issue, we share the highlights of the 2021 Awards.

Making our working lives meaningful

Self-Determination Theory (SDT) provides a framework for understanding what makes our working lives meaningful:

> **relatedness**, the sense of belonging and connectedness with others
> **competence**, the sense of mastery over tasks that are important to us
> **autonomy**, the sense of control over our own destiny.

It's a theory that grew out of Deci and Ryan's work[1] to understand internal and external motivations, and has been applied to explain what keeps us engaged and motivated at work. It is based on the assumption that people are naturally oriented towards growth and strive to develop skills, independence and connection with others, but rely on positive social environments to meet their basic psychological needs for autonomy, competence and relatedness. Intrinsic motivation can be influenced by external factors and social contexts. As a consequence of this interplay, our professional environments can influence our ability to remain curious, connected and engaged at work, or become fragmented, detached and demotivated. Understanding this theory helps us to understand why so many dentists have felt professionally compromised by the current public dental schemes and contracts, and frustrated by the lack of engagement to resolve this. In her editorial, our President Clodagh McAllister shares the steps the Association is continuing to take on behalf of dental patients and the profession.

In this issue

The SDT model can also be applied to what engages and motivates our patients. Gerry McKenna edited the recently published textbook *Nutrition and Oral Health* (p298), which provides an excellent overview of the relationship between oral health and nutrition, and supporting patients in health behaviour change.[2] On page 332, we introduce a 'quick revision series' article, providing a review of necrotising periodontal diseases and an illustrative case example. I thank Eamonn Donohoe and his colleagues for this article and welcome readers' feedback and suggestions for further topics.

In our peer review section, Niamh Kelly and her colleagues report on dentists' perceptions of managing care for patients on oral anticoagulants and offer guidance for practitioners to support this care in a primary setting, when appropriate. Dermot Canavan and his colleagues have recently established a new postgraduate certificate programme in orofacial pain management at Trinity College Dublin, and in this issue, they provide an excellent overview of the known risk factors and common clinical scenarios associated with chronic pain after dental procedures. In our practice management article, Martin Foster shares Dental Protection's insights on clinical scenarios and common risk factors that can lead to professional vulnerability.

In anticipation of the Irish Dental Association's centenary in 2023, the IDA has commissioned Eoin Kinsella to write the history of the Association, and on p298 there are details of how to contribute to this. In this issue, Peter Cowan tells his story of four generations of his family practising dentistry in Dublin across three centuries. Change in our profession is a constant and it is fitting that this is the theme of the IDA Practice Management Seminar on January 29, details of which are on p296.

A time of change

2022 also marks a change in leadership for the *JIDA*, and I am delighted to congratulate Cristiane da Mata on her appointment and have every confidence that she will guide the *Journal* in a new and exciting direction. It has been a privilege to be Honorary Editor of the *JIDA* for the last 19 issues. It has been a really engaging and fulfilling professional experience and this has been thanks to the wonderful editorial team, the skills and knowledge they each bring to the *Journal*, and the opportunity to develop and share my own ideas for the *JIDA*. I would like to thank Ann-Marie Hardiman and our publishers, Liz Dodd, Fintan Hourihan and all the team at IDA House, Siobhain Davies and our Editorial Board, and all of the authors, peer reviewers, and contributors I have worked with over the last three years. We can start 2022 with a determination to continue to grow professionally, both individually and collectively.

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1. Araujo M W B et al. Meta-analysis of the effect of an essential-oil containing mouth rinse on gingivitis and plaque. JADA 2015; 146:610-622

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Dr Clodagh McAllister
IDA President

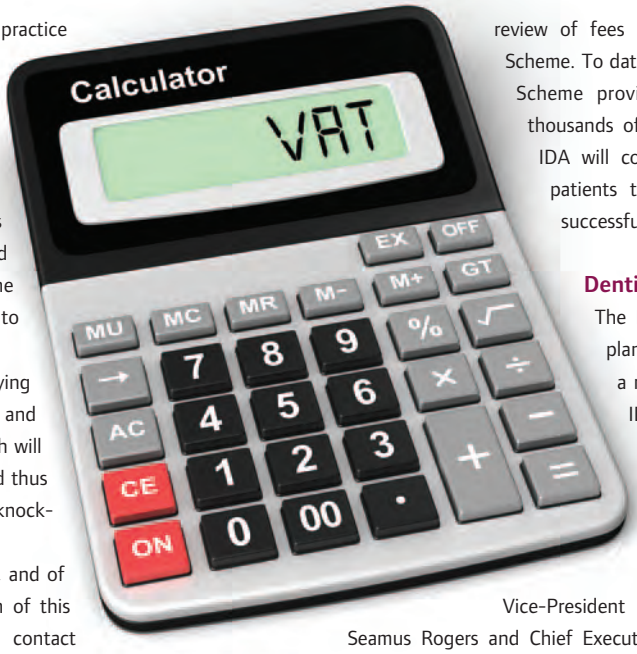
We must join together and stay strong

The Department of Health has finally indicated a willingness to engage on the crisis in the medical card scheme. However, other issues such as VAT liability for dentists in private practice, are threatening the viability of practice in Ireland.

A serious issue has arisen for dentists in private practice with regard to potential VAT liability. While dental services are deemed VAT exempt in accordance with Irish and EU legislation, Revenue's decision to regard the fees paid by associates to principal dentists as general services, and therefore liable for VAT, has serious implications for dental businesses, and for the provision of dental services in Ireland. The IDA has met with Revenue in an attempt to resolve the issue, and discussions are ongoing.

The Association has also launched a major lobbying campaign, and has written to Ministers, TDs and Senators to raise awareness of this issue, which will inevitably lead to higher costs for patients, and thus to patients delaying essential dental care, with knock-on effects for oral and general health.

You can read extensive coverage of this issue, and of the IDA's campaign, in the members' section of this edition. To get involved in the campaign, contact president@irishdentalassoc.ie.



Dental schemes

We welcome the Minister for Health's recent announcement of a "root and branch" review of the Dental Treatment Services Scheme (DTSS), which, it is hoped, will begin in the New Year. The ongoing crisis in the medical card scheme finally made it to the floor of the Dáil recently, where Minister of State Anne Rabbitte TD stated clearly that the Department of Health and the Minister would engage with the IDA and contracted dentists to address the issues of concern.

The IDA has long argued that the current Scheme is not fit for purpose, and that nothing short of a new contract, which reflects best evidence and practice, and which remunerates dentists appropriately for treatment carried out, will be acceptable. We are also very aware that our previous attempts to engage in discussions on this issue with the Department have not been successful. We hope that this time will be different, and we stand ready to work with Government to resolve this crisis for dentists and their patients.

The Association has also sought a meeting with the Minister for Social Protection with regard to the Dental Treatment Benefit Scheme (DTBS). Under the terms of the contract, the Department agreed to undertake an annual review of fees paid to dentists participating in the Scheme. To date, no such review has taken place. This Scheme provides essential dental care to many thousands of qualifying adults in Ireland, and the IDA will continue to advocate for dentists and patients to ensure that it continues to be a successful and workable scheme.

Dentists Act

The Department of Health has announced plans to amend the Dentists Act 1985, with a new Act to follow at a later stage. The IDA has long campaigned for a new Act, and welcomes this decision. The Association has been invited by the Department to indicate the reforms it feels should be prioritised, and has appointed a sub-committee of myself, Vice-President Dr Anne O'Neill, Honorary Treasurer Seamus Rogers and Chief Executive Fintan Hourihan to co-ordinate a submission to the Department. We would be delighted to hear from members who wish to share their views as to what reforms are needed to the Act. Please contact us at president@irishdentalassoc.ie to have your say.

Colgate Awards

It was fantastic to be able to meet and celebrate with colleagues once again at the recent Colgate Caring Dentist and Dental Team Awards in Dublin. The Awards, which are nominated by patients, show us time and time again the fantastic work carried out by dentists and dental team members all over Ireland. Congratulations to the overall winner, Dr Colm O'Loghlen, and to all of the winners and nominees on the night – you are a credit to your profession. You can see images from the night, and read about the nominees and winners, in this edition of the *Journal*.

Thanks to Ciara

This edition of the *Journal* is the last to be edited by Dr Ciara Scott, who has reached the end of her term of office as Honorary Editor. On behalf of the Association, I want to thank Ciara for her hard work and safe steering of the *Journal* over the last three years. I also wish to welcome Dr Cristiane DaMata, who has been appointed as new Honorary Editor.

New Journal Editor appointed

Dr Cristiane da Mata has been appointed as Honorary Editor of the *Journal of the Irish Dental Association*. Christiane will take over from Dr Ciara Scott, who has reached the end of her term of office.

Cristiane qualified as a dentist from the UFMG, Brazil, in 2000, and after working in practice for a few years, she moved to Ireland where she decided to pursue an academic career. She has worked as a Senior House Officer in Restorative and Paediatric Dentistry, and completed a Master's in Public health and a PhD on the use of the atraumatic restorative treatment (ART) in older patients.

Cristiane is a lecturer in restorative dentistry in the Cork University Dental School and Hospital. She teaches undergraduate and postgraduate students, is a year and module lead, and recently chaired the School's Athena Swan Committee, which resulted in a Bronze Award for the School in 2020.

Cristiane has published extensively in high-impact journals and is a member of the European College of Gerodontology and the International Association of Dental Research (IADR) collaborating with a number of dentists and researchers nationally and internationally. Her areas of interest include minimally invasive dentistry, ART, cariology, gerodontology, quality of life, and dental public health.

ISDC evening lecture

Pictured at the ISDC evening lecture were (from left): Dr Niall Muldoon, Ombudsman for Children; Dr Nicolette Ravenscroft, President, ISDC; and Dr Anne O'Connell, DDUH.

On Friday, November 12, the Irish Society of Dentistry for Children held an evening lecture in the Dublin Dental University Hospital (DDUH). The successful event showcased two thought-provoking presentations. Dr Niall Muldoon, Ombudsman for Children in Ireland, spoke about his role as Ombudsman as well as the trials faced by children during the Covid-19 pandemic. Dr Anne O'Connell, Associate Professor/Consultant in Paediatric Dentistry, DDUH, and President of the International Association of Dental Traumatology (IADT), updated attendees regarding the Revised 2020 IADT Guidelines for the Management of Traumatic Dental Injuries.

The Society's annual scientific meeting will take place on Friday, May 20, 2022.

DDUH seeks patients for dental education

The Dublin Dental University Hospital is seeking to recruit edentulous patients for educational purposes, to provide training to students in the management of the edentulous patient and complete denture fabrication.

Patients that would be suitable would preferably have some height to the edentulous ridges (have not undergone a severe level of resorption), and with a class I maxillo-mandibular arch relationship.

If you would like to refer patients, please send the name and address to patient@dental.tcd.ie and indicate that the patient is edentulous.

Annual Practice Management Seminar returns in January 2022

The IDA is delighted to announce that the annual Practice Management Seminar will take place face to face on Saturday, January 29, 2022. The event will take place at the Hilton Hotel Charlemont, Dublin 2.

A great line-up of speakers and topics is planned, including an update from the Dental Council, and presentations on buying and selling a dental practice, looking after your mental health, tax and dentistry, and much more.

An interesting panel discussion is due to take place, professionally moderated, on the general topic of 'The Changing Face of Dentistry in Ireland'. This session will give all delegates the opportunity to voice their opinions or ask questions on how the dental profession sees the future of dentistry, and how best to meet these challenges and opportunities. Full details to be announced soon.

Annual Conference 2022

At the time of writing, the IDA is delighted to announce that our much-awaited Annual Conference will take place face to face after a two-year wait in May 2022!

The event will take place from May 12-14 at our much-loved conference home of the Galmont, Galway. Like a lot of events in 2020, the IDA was very disappointed to have to cancel our Annual Conference.

A stellar line-up of local and international speakers is planned, including Dr Minesh Patel, Prof. Mike Lewis, Dr Markus Blatz and Prof. Wally Rene, to name but a few. The full programme will be available very soon.

Don't delay and book early. Some popular hands-on courses will fill up fast.

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Caring Dentist Awards 2021

COLGATE CARING DENTIST AND DENTAL TEAM OF THE YEAR AWARDS 2021

The judges were delighted to receive so many entries this year despite the pandemic. After reading all of them, the judges made unanimous decisions.

The Colgate Caring Dentist of the Year for 2021 is Dr Colm O'Loghlen and the Colgate Caring Dental Team of the Year for 2021 is Ballina Dental Practice.

Congratulations to Colm, to all of the Ballina Dental Practice team, to the regional winners, and to all the dentists and dental teams that were nominated for an award by their patients.

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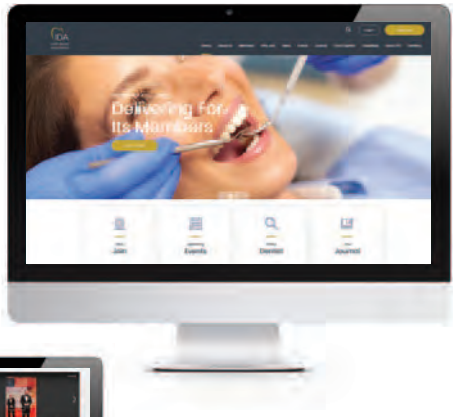


The IDA website has a new look, but still contains a wealth of information on all aspects of dentistry in Ireland. You can check out the video testimonials on our home page, stay updated on the latest news, read the *Journal of the Irish Dental Association* online, or book one of our outstanding CPD courses. Our exclusive members' area contains policy information, contract templates, and advice on a range of issues to help you run your practice. It's all there at www.dentist.ie.

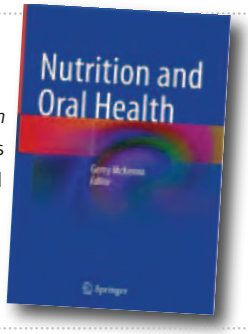
Be part of IDA history

The Irish Dental Association will celebrate its centenary in 2023. As part of its programme of celebration, the IDA is delighted to announce that it has commissioned Dr Eoin Kinsella to research and write a comprehensive history of the Association for publication in early 2023. The history will span the entire century of the IDA's existence. Eoin will have access to research collections in a wide variety of archival repositories, as well as the IDA's own records. He is also anxious to hear from members of the Association, past and present, who have material in their possession that might shed some light on its past. Can you help? Do you have old photos of IDA events, or documents relating to the Association's activities, its policies or its social events, that you would be willing to share with Eoin? If so, he would be delighted to hear from you.
You can reach him by emailing eoinkinsella@gmail.com.

Eoin is the founder and director of historyworks, providing historical consultancy and research services in the fields of heritage and public history. He holds a PhD in Irish history from UCD and is the author of: The Irish Defence Forces, 1922–2022: Servant of the Nation (forthcoming, Four Courts Press, 2022); Dublin City University, 1980–2020: Designed to be Different (Four Courts Press, 2020); Catholic Survival in Protestant Ireland, 1660–1711 (Boydell, 2018); and, Leopardstown Park Hospital 1917–2017: A Home for Wounded Soldiers (2017).

Nutrition and Oral Health

Edited by Dr Gerry McKenna of Queen's University Belfast, *Nutrition and Oral Health* is a recently published textbook describing the effects of nutrition on oral development and oral health, and the impact of oral health on nutrition, mastication and overall health. The book includes contributions from Irish dentists Martina Hayes, Cristiane da Mata, Francis Burke, Lewis Winning and Ciaran Moore.



In May 2021, the WHO Resolution firmly placed oral health on the global health agenda and this publication is well timed to explain the current evidence to support the ancient wisdom that food is a medicine. The book provides a valuable insight to understanding the relationship between nutrition and oral health, and clearly explains and references a large number of peer-reviewed papers and policy documents.

Quiz

Submitted by Dr Aisling Donnelly.

Questions

A 33-year-old patient attended for a consultation complaining of a previous history of temperature sensitivity to the lower left lateral incisor. The sensitivity had stopped but she had now noticed the tooth become darker over the previous few weeks. On examination, the tooth was tender to percussion and testing non vital. A periapical X-ray (**Figure 1**) and cone beam computed tomography (CBCT) scan (**Figure 2**) were taken.

1. What pathological process is occurring here?
2. What is the likely aetiology?
3. What is the usual clinical presentation of this process?
4. What are the potential management options?

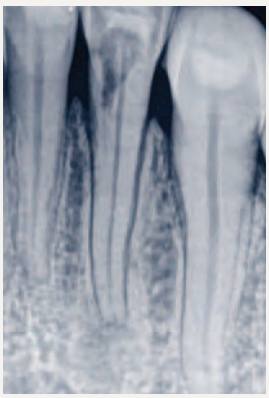


FIGURE 1: Peri-apical X-ray.

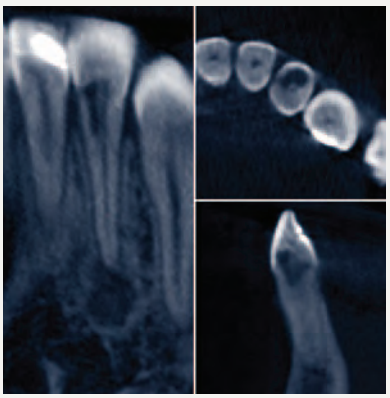


FIGURE 2: CBCT scan.

Answers on page 352

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Next steps for Sláintecare

Prof. Máiréad Harding

Dr Úna McAuliffe

Prof. Máiréad Harding and Dr Úna McAuliffe, in collaboration with The Dental Health Foundation, were keynote speakers at a recent national forum for health policy entitled 'Next steps for Sláintecare – implementation, regulation, and priorities for public health, the workforce, and moving forward in the wake of Covid-19'. Delegates considering the priorities for Ireland's health and social care system included Mr Paul Reid, Director General and CEO of the HSE, leading clinicians from across the health service, and members of the Oireachtas Health Committee.

Prof. Harding and Dr McAuliffe highlighted the neglect of oral health in the general health policy arena, particularly its limited recognition in Sláintecare and Healthy Ireland, while emphasising the prevalence of oral diseases as major non-communicable diseases. An overview of the current publicly funded dental system was provided, illustrating the gaps in coverage for some of the most vulnerable members of our population. Prof. Harding and Dr McAuliffe urged delegates that two years after the publication of 'Smile agus Sláinte', oral health needs an equal seat at the table, and should be included in any future health system reform under the universal healthcare agenda.

Hands-on courses 2022

Preparation Design in Fixed Prosthodontics

This full-day hands-on course will take place at the following venues/dates:

- Kerry: Great Southern Hotel, Killarney – Saturday, February 5, 2022, with Dr Seamus Sharkey, prosthodontist, Cork; and,
- Dublin: Radisson Hotel, St Helens Stillorgan – Friday, February 11, 2022, with Dr Maurice Fitzgerald, prosthodontist, Dublin.

Both courses are supported by Coltene and NSK.

*Please note, courses differ slightly – see full details of course and booking. Numbers strictly limited.

BLS courses for dental practices offering sedation

A full-day course specifically designed for those who offer sedation for BLS and medical emergencies will take place in the following venues and dates:

- Friday, February 18, Dublin
- Friday, February 25, Athlone
- Friday, March 11, Cork

General BLS/medical emergency courses

General BLS/medical emergency courses will also take place:

- Saturday, February 19, Dublin
- Saturday, February 26, Athlone
- Saturday, March 12, Cork.

Hal Duncan appointed editor of *International Endodontic Journal*

Dr Hal Duncan, Prof./Consultant in Endodontics, Trinity College Dublin, has been appointed as Editor in Chief of the *International Endodontic Journal*.

Dr Duncan received his dental degree from the University of Glasgow, his endodontic specialty training in Guy's Hospital, King's College London, and his PhD from the University of Birmingham. Hal has published over 80 international peer-reviewed scientific articles, 40 research abstracts, and 17 book chapters, as well as editing two textbooks. He has been an Associate Editor for the *International Endodontic Journal* since 2014. Currently, he is the Director of Research in the DDUH, the Chair of Membership Committee of the ESE, a Member of the Executive Board of the ESE, the President of the Irish Division of the IADR, the Vice-President of the Pulp Biology and Regeneration Group of the IADR and a Board Member of the Pan European Region of the IADR.

Webinars/branch meetings 2022

Webinars will continue on Wednesday evenings, unless otherwise advertised, at 8.00pm; however, they will move to monthly events as opposed to weekly in spring 2022.

The first webinar is due to take place on Wednesday, January 26, and the presenter will be Dr Ed Owens on 'Sleep medicine – an update'.
All webinars are available for members to view at any time (except for those indicated) on the members section of www.dentist.ie.
It is hoped that branch/regional meetings will recommence in early 2022.

Conservative caries management

Coltene states that many older patients would rather keep their own teeth than be fitted with a denture. According to the company, for restoring carious defects in a single appointment, its Brilliant Componeer is a veneering system comprised of prefabricated veneer shells. Coltene states that the restoration can be adjusted in the chair if required, and it is highly aesthetic.

The company also states that its Brilliant EverGlow material is good for restorations and enables an efficient workflow. And for the treatment of wear and tear caused by bruxism, Coltene states that its Brilliant Crios composite bloc is strong and the ideal choice for bruxism patients. The product comes in two sizes, three translucencies and 15 shades.

At Dental Care Ireland's inaugural Dentists' Education Weekend were: Front row (from left): Dr Clodagh Collins; Dr Jennifer Collins (Clinical Director, DCI); Colm Davitt (CEO, DCI); Dr Geenan Alrubae; Dr Aisling Wallace; and, Dr Simon Stokes. Second row (from left): Dr Eileen O'Mahony; Sinead Owens (Operations, DCI); Dr Marin Minihan; Dr Helen Matthews; Dr Claire Burns; Dr Niamh O'Gorman; Dr Gina Kilfeather; and, Michelle Downey (Marketing, DCI). Third row (from left): Sue Molloy (Operations, DCI); Dr Jennifer Huston; Dr Maeibh MacNamara; Dr Karen Grealis; Dr Nishta O'Connor; Dr Cecilia Galli; and, Dr Niamh Roe. Back row (from left): Dr Amita Bhagwat; Dr Aoife Farrell; Dr Brendan O'Connor; Dr Adeen Solaiman; Dr David Hendrick; Dr Rory Fleming; Dr David Kelly; and, Dr Pat Hartnett.

Dental Care Ireland Education Weekend

Dental Care Ireland's inaugural Dentists' Education Weekend took place on October 9-10 in Dublin's Mayson Hotel. Facilitated by Dr Jennifer Collins, Clinical Director at Dental Care Ireland, the group states that the weekend provided an opportunity for practical training, networking and peer discussion. Dr Collins said: "For the first time this year, we decided to build on our annual training day and create an entire weekend event aimed at upskilling, reskilling and thanking our dentists for their dedication throughout the challenges of the last 18 months. Based on the positive feedback from colleagues, we aim to develop our education programme further in 2022".

Speaking at the opening of the event, Colm Davitt, CEO, Dental Care Ireland, said: "At Dental Care Ireland, we invest in both our practices and our people for the long term. Since the start of the pandemic, our organisation has doubled in size. With 22 practices nationwide, it is the quality and professionalism of our team that sets us apart".

New developments at Align

Align Technology has released iTero Workflow 2.0 software and previewed its new iTero Element 5D imaging system auto-upload functionality. According to the company, the newly released iTero Workflow 2.0 software features include faster scanning, improved visualisation, and enhanced patient communication tools that help increase practice efficiency, support better clinical diagnosis, and drive patient engagement for treatment acceptance.

Also available soon is the iTero Element 5D imaging system, which Align Technology states is a new auto-upload feature that will streamline Invisalign case submissions by enabling intraoral colour scan images to be used in place of traditional intraoral photos.

Yuval Shaked, Align SVP and MD of the iTero systems and services business, said: "Our new iTero Workflow 2.0 software features were developed to simplify and streamline a doctor's daily routine and increase practice efficiency".

Align Technology has also signed an agreement with Ultradent, which the company states is a leader in tooth whitening, to offer Invisalign-trained doctors an exclusive professional whitening system with the Opalescence PF whitening formula. The system will carry the name of 'Invisalign Professional Whitening System – powered by Opalescence' and according to Align, will offer great whitening outcomes and streamlined practice experience.

Dentsply Sirona funds cleft surgeries

October 1 was World Smile Day – a day devoted to smiles and acts of kindness all over the globe. In anticipation of World Smile Day, Dentsply Sirona asked participants at this year's Dentsply Sirona World in Las Vegas to join them in supporting Smile Train to help change the lives of children born with clefts. Dentsply Sirona states that in just three days the company and its partners came together to fund cleft surgeries for hundreds of children around the world.

Dentsply Sirona states that it is taking action to support Smile Train's work with the launch of a five-year renewable partnership aimed at having a lasting, long-term, positive impact. According to Dentsply Sirona, it has committed to donating $5,000,000 to Smile Train through the partnership. According to the company, Smile Train's local medical professionals are already leveraging digital technologies such as the company's Primescan intraoral scanners and developing innovative protocols that minimise the travel required by patients and their families to improve access to care.

Primescan

Dentsply Sirona states that its intraoral scanner Primescan is a good starting point for all key digital workflows that can assist in further improving dental treatment in restorative dentistry, orthodontics and implantology. According to the company, digital impression with Primescan has now been validated for full-arch fixed implant restorations with Atlantis suprastructures.

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Above and beyond

The Colgate Caring Dentist and Dental Team Awards returned in November with fantastic stories of dentists who went the extra mile for their patients in a time of national crisis.

> "This has been an era-defining period. A global pandemic, which no one saw coming, and which stretched us in ways we wouldn't have imagined. There have been heart-breaking and heart-warming moments, and some of those heart-warming moments are being celebrated here tonight."

In her speech at the Colgate Caring Dentist and Dental Team Awards, IDA President Dr Clodagh McAllister summed up an extraordinary period in all our lives.

The Awards returned in November to Dublin's InterContinental Hotel after a Covid-enforced hiatus, and the impact of the pandemic was clear in the nature of the nominations, and in the responses of dentists and dental teams to their patients' anxieties and needs.

Dr McAllister acknowledged the many loved ones lost during the pandemic, and how fortunate those present were to be together and celebrating after such an extraordinary and at times terrible period. She also acknowledged the contribution of dentists and dental teams to the fight against Covid-19, praising the many dental professionals who were redeployed to vaccination and contact tracing, and the many more who volunteered their time so as to release other healthcare staff to frontline services.

Dr McAllister thanked this year's judges, Chairman of the judging panel Dr Barry Harrington, and Drs Seton Menton, Frances O'Callaghan and Divya Sweeney, for their work in sifting through the many patient nominations to choose this year's winners. In their comments, the judges drew attention to the fact that any dental examination or treatment requires that the patient has complete and unreserved confidence in their dentist, a confidence that must be earned by the profession. This year's nominations included numerous examples of dentists who earned that trust with kindness and empathy, in a clean and safe environment.

The Awards could not take place, of course, without the support of Colgate, who were represented on the night by a team led by Jonathan White and Stephanie Gribben.

Colgate Caring Dentist of the Year

Overall winner

Dr Colm O'Loghlen

A 15-year-old boy was climbing a wall and unexpectedly fell off it face first. He arrived home to his mother with his two front teeth in his hand and having swallowed another tooth. He was very badly cut and bruised, and was traumatised. His mother put the two teeth in a container and drove immediately to the hospital in Tralee where they live. It was a Saturday evening and there was no dentist available in the hospital to treat the boy. Now herself in a state of panic as the boy had already completed a full orthodontic treatment, the mother put out a call on social media for any dentist that might be able to help. By this time it was 9.30pm on a Saturday evening. Dr Colm O'Loghlen responded and told the mother and her son to meet him at his surgery. He managed, despite the stitches in the boy's lips and the significant swelling on his face, to replace the two front teeth successfully, and no further treatment has been required since.

The judges' citation is:

For his clinical skills provided to a traumatised teenager at an out-of-hours emergency, Dr Colm O'Loghlen is the national winner of the Colgate Caring Dentist of the Year Award.

Connacht/Ulster winner

Dr Bernadette Fee

On the evening of her husband's birthday, Dr Bernadette Fee got a call from a woman who lived locally but who was not a regular patient of Dr Fee's practice. The woman had been out cycling, hit a stone and was thrown off the bicycle head first, landing on her face and causing her front teeth to be, as she described it: "knocked horizontal". Dr Fee arranged for the woman to come to her practice immediately, where she treated her cuts and bruises as well as providing emergency treatment for her teeth, which required an x-ray. The woman was very grateful for her treatment: in an emergency, out of hours, and not being an existing patient, she was treated with great gentleness as well as clinical skill.

The judges' citation is:

For that dedication, Dr Bernadette Fee is the Connacht/Ulster Region winner of the Colgate Caring Dentist of the Year Award.

RIGHT: Jonathan White of sponsors Colgate, gave a warm welcome to all the nominated dentists.

BOTTOM RIGHT: Anton Savage, was the genial Master of Ceremonies on the night.

Dublin winner

Dr Irene Lavin

An 86-year-old man had an extraction carried out by Dr Irene Lavin at her surgery in Dublin and returned home as normal. However, that afternoon post-extraction bleeding became excessive. With the patient having contacted the surgery, Dr Lavin drove to his home, which was a good distance away, assessed him and then drove him herself to the Mater Hospital to ensure that he received the care he needed in a hospital setting. Unfortunately, having been seen and then discharged from the Mater Hospital, the problem re-emerged the following day. Despite being on leave, Dr Lavin responded immediately to the family and arranged for him to be seen that day at the Dublin Dental University Hospital, where the issue was treated and resolved. Dr Lavin was nominated by the patient's daughter who, being familiar with the medical world, was impressed by the outstanding personal care provided to her father.

The judges' citation is:

For her exceptional determination to ensure that her patient received the care needed when an unanticipated problem arose, Dr Irene Lavin is the Dublin Region winner of the Colgate Caring Dentist of the Year Award.

Rest of Leinster winner

Dr Lisa Lucey

In the early weeks of the first pandemic lockdown, our nominator received a call on her mobile from a number she did not immediately recognise. It was her family dentist, Dr Lisa Lucey, calling to offer any assistance she could to the woman's two daughters, who suffer from cystic fibrosis. Dr Lucey was going through her list of patients to identify anyone who might be especially challenged or vulnerable to the threat of Covid-19. She was then calling them to offer the family anything that she might be able to help with, such as masks and hand gels. She also offered to help with supplies of emergency oxygen for the two patients if that was needed. The mother nominated Dr Lucey for going well beyond what was needed or expected of a family dentist, and for proving that in a time of acute threat to vulnerable patients, she could provide support that would be vital to the well-being of her patients.

The judges' citation is:

For her exceptional dedication to the well-being of her patients in a time of crisis, Dr Lisa Lucey is the Rest of Leinster Region winner of the Colgate Caring Dentist of the Year Award.

Special Award

Dr Fionn Murphy

The judges wished to make a special award to a dentist who has improved the quality of life of a 34-year-old man with special needs. The mother of this man nominated Dr Fionn Murphy for agreeing to provide the man with a set of dentures, despite the patient having seen several dentists in previous years who would not consider providing him with dentures. In doing so, Dr Murphy made this patient feel special and, by giving him a set of dentures, has ensured that the man looks well, which, according to the patient's mother, has had a significantly beneficial effect on his well-being when he goes out.

The judges' citation is:

For his dedication to caring for the needs of a patient in a way that significantly improved their quality of life, Dr Fionn Murphy is the winner of a Special Recognition Award in the Colgate Caring Dentist of the Year Awards.

Skudexa ▽ ® 75 mg/25 mg film-coated tablets (tramadol hydrochloride/dexketoprofen). Abbreviated Prescribing Information

Please consult the Summary of Product Characteristics (SmPC) for full prescribing information.

Presentation: Film-coated tablets containing tramadol hydrochloride 75 mg and dexketoprofen 25 mg. Excipients with known effects: croscarmellose sodium and sodium stearyl fumarate

Use: Symptomatic short term treatment of moderate to severe acute pain in adult patients whose pain is considered to require a combination of tramadol and dexketoprofen.

Dosage: Adults: 1 tablet (75 mg tramadol hydrochloride/ 25 mg dexketoprofen), additional doses as needed with a minimum dosing interval of 8 hours. Maximum daily dose 3 tablets/day. Use lowest effective dose for the shortest duration necessary to control symptoms. Maximum duration of use is 5 days. Patients with mild-moderate hepatic dysfunction or mild renal dysfunction: maximum daily dose is 2 tablets/day. Elderly: initial dose is 2 tablets/day can be increased to a maximum of 3 tablets/day after good tolerance established. Use with caution in patients over 75 years.

Contra-indications: Hypersensitivity to any component or other NSAID or excipients. NSAID induced attacks of asthma, bronchospasm, acute rhinitis, or nasal polyps, urticaria or angioneurotic oedema. Known photoallergic or phototoxic reactions during treatment with ketoprofen or fibrates. History of gastrointestinal bleeding or perforation, related to previous NSAIDs therapy. Active peptic ulcer/gastrointestinal/haemorrhage or any history of gastrointestinal bleeding, ulceration or perforation, chronic dyspepsia, other active bleeding or bleeding disorders, Crohn's disease or ulcerative colitis, severe heart failure, moderate-severe renal dysfunction, severe hepatic dysfunction, haemorrhagic diathesis and other coagulation disorders, severe dehydration. Acute intoxication with alcohol, hypnotics, analgesics, opioids or psychotropic medicinal products. Concomitantly with MAO inhibitors or within 14 days of having taken them. Inadequately controlled epilepsy. Severe respiratory depression. Pregnancy and lactation.

Warnings and precautions: *Dexketoprofen:* Caution in allergic conditions. Avoid use with concomitant other NSAIDs including COX-2 selective inhibitors. Gastrointestinal bleeding, ulceration or perforation which can be fatal, have been reported with all NSAIDs at anytime during treatment, with or without warning symptoms or a previous history of serious gastrointestinal events. When gastrointestinal bleeding or ulceration occurs withdraw treatment. The risk of gastrointestinal bleeding, ulceration or perforation is higher with increasing NSAID doses, in patients with a history of ulcer, particularly if complicated with haemorrhage or perforation, and in older people. Ensure cure of oesophagitis, gastritis and/or peptic ulcer before starting treatment. Consider combination therapy with protective agents (e.g. misoprostol or proton pump inhibitors), and in patients requiring concomitant low dose aspirin, or other drugs likely to increase gastrointestinal risk. Monitor patients with a history of gastrointestinal toxicity, particularly when elderly, for unusual abdominal symptoms (especially gastrointestinal bleeding) particularly in the initial stages. Caution in patients receiving oral corticosteroids, anticoagulants, SSRIs or anti-platelet agents. Caution in patients with impairment of renal function, receiving diuretic therapy or those who could develop hypovolaemia. Ensure adequate fluid intake. Caution in liver impairment. Appropriate monitoring and advice required with history of hypertension and/or mild to moderate heart failure. Special caution in patients with cardiac disease, especially episodes of previous heart failure. Only treat patients with uncontrolled hypertension, congestive heart failure, established ischaemic heart disease, peripheral arterial disease, and/or cerebrovascular disease after careful consideration. Similarly for risk factors for cardiovascular disease (e.g. hypertension, hyperlipidaemia, diabetes mellitus, smoking). Caution in haematopoietic disorders, systemic lupus erythematosus, connective tissue disorders, impairment of hepatic and/or renal functions, history of hypertension and/or heart failure, diuretic therapy, the elderly. Older people are more likely to be suffering from impaired renal, hepatic and cardiovascular function. Serious skin reactions (some of them fatal), including exfoliative dermatitis, Stevens-Johnson syndrome, and toxic epidermal necrolysis were reported very rarely. Particular caution is required in patients with congenital disorder of porphyrin metabolism, dehydration, directly after major surgery. Severe acute hypersensitivity reactions have been observed on very rare occasions. Discontinue treatment at the first signs of severe hypersensitivity reactions. Can cause asthma attacks or bronchospasm, particularly in subjects allergic to acetylsalicylic acid or NSAIDs. Avoid use in case of varicella. Do not use with warfarin, other coumarins or heparin. Can mask the symptoms of infectious diseases. *Tramadol:* Use with particular caution in patients with an addiction, head injury, shock, reduced level of consciousness of uncertain origin, disorders of respiratory centre or function or increased intracranial pressure. Use with caution in patients sensitive to opiates. Care should be taken in treating patients with respiratory depression, with concomitant CNS depressant drug administration or significant excess of the recommended dose as resulting respiratory depression cannot be excluded. Convulsions have been reported with recommended doses of tramadol, this risk may increase when exceeding the recommended upper daily dose limit (400mg). Seizure risk increases in patients taking other seizure threshold lowering medications. Only treat patients susceptible to seizures with tramadol if circumstances are compelling. Tolerance, psychic and physical addiction may develop. For patients with abuse/dependence potential only treat for short periods under strict medical supervision. Consider tapering dose gradually when discontinuing treatment to prevent withdrawal symptoms. Tramadol in combination with other serotonergic agents or alone can cause serotonin syndrome. Opioids can cause sleep-related breathing disorders including central sleep apnoea (CSA) and sleep-related hypoxemia consider decreasing the total opioid dosage in patients with CSA. Opioid analgesics may occasionally cause reversible adrenal insufficiency requiring monitoring and glucocorticoid replacement therapy. CYP2D6 deficiency may reduce the analgesic effect, whereas ultra-rapid metabolisers of CYP2D6 incur risk of opioid toxicity even at commonly prescribed doses. Extreme caution and close monitoring for opioid toxicity required when administering tramadol to children for post-operative pain relief. Not recommended in children with compromised respiratory function. *Skudexa:* Not for use in children and adolescents. Concomitant use with sedative medicines such as benzodiazepines or related drugs should be reserved for patients with no alternative treatment options, using the lowest effective dose and an as short as possible treatment duration while following them closely for signs of respiratory depression and sedation.

Interactions: *Dexketoprofen:* Other NSAIDs, anti-coagulants, heparins, corticosteroids, lithium, methotrexate, hydantoines and sulphonamides, diuretics, ACE inhibitors, antibacterial aminoglycosides and angiotensin II receptor antagonists, pentoxyfilline, zidovudine, sulfonylureas, beta-blockers, cyclosporin and tacrolimus, thrombolytics, anti-platelet agents and SSRIs, probenecid, cardiac glycosides, mifepristone, quinolone antibiotics, tenofovir, deferasirox, pemetrexed. *Tramadol:* MAOIs, coumarin derivatives (e.g. warfarin), mixed agonists/antagonists opioid receptors (e.g. buprenorphine, nalbuphine, pentacozine), SSRIs, SNRIs, tricyclic antidepressants, antipsychotics and other seizure threshold-lowering medication (e.g. bupropion, mirtazapine, tetrahydrocannabinol), sedative medicines such as benzodiazepines, centrally depressant medications or alcohol, cimetidine, carbamazepine, ondansetron (5-HT3 antagonist) and substances inhibiting CYP3A4 (e.g. ketoconazole, erythromycin).

Pregnancy and lactation: Contra-indicated during pregnancy and lactation. Do not use in women attempting to conceive.

Side-effects: *Skudexa: Common (≥ 1/100, <1/10):* dizziness, nausea, vomiting. *Uncommon (≥ 1/1000, <1/100):* thrombocytosis, laryngeal oedema, hypokalaemia, psychotic disorder, headache, somnolence, periorbital oedema, vertigo, tachycardia, hypertensive crisis, hypotension, abdominal distension, constipation, dyspepsia, raised LFTs, face oedema, hyperhidrosis,urticaria, haematuria, asthenia, chills, discomfort, feeling abnormal, BP increased, increased alk phos, increased LDH. For less frequent side effects and side effects associated with the individual constituents see SmPC.

Pack size: 15 tablets. **Legal category:** POM A **Marketing authorisation number:** PA 865/20/1

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Date of preparation: August 2021

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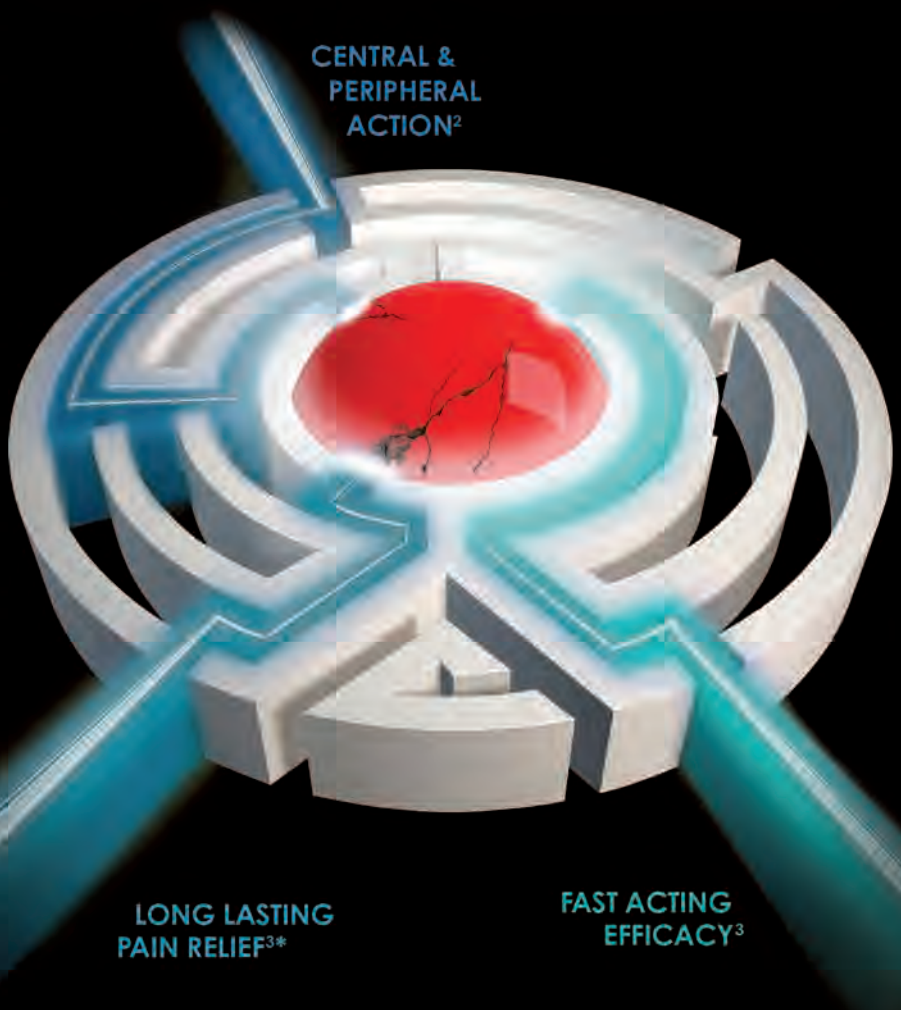

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References: 1. Skudexa Summary of Product Characteristics, August 2021 2. Moore RA et al. BMC Anaesthesiol. 2016; 16:9 3. Moore RA et al. The Journal of Headache and Pain. 2015; 16:60 4. McQuay HJ et al. Br J Anaesthesia. 2016; 116:269-276 5. Gay-Escoda C et al. BMJ OPEN 2019; 9:e023715. doi 10.1136/bmjopen-2018-023715

Date of item: September 2021. IR-SKU-14-2021

Dr Bernadette Fee.

IDA CEO Fintan Hourihan and Helen Hayes.

IDA President Clodagh McAllister and Dr Lisa Lucey.

Dusan Dumic and Katie Halpin, Dame Street Dental.

From left: Dr Christine Smith; Jessica Artrong; Dr Ciara Scott; and, Dr Sinead O'Hanrahan.

ABOVE: Stephanie Gribben, Colgate with Dr Bronagh Keane of Seafield Dental.

LEFT: The winning team from Ballina Dental Practice. Back row (from left): Brenda Walsh; Lorna McGowan; Michael Crowley; Caroline Judge; Anne Marie Flannery; Elaine McDonnell; and, Clare Scanlon. Seated: Mary Dunne and Dr Paul Dunne.

RIGHT: Valerie and Dina Lazarenco of Tom Houlihan Orthodontics.

Caring dental team award winners

Ballina Dental Practice

In Mayo, a dentist was called out twice over a relatively short space of time to deal with dental sports injuries – a girl with no mouthguard, and a boy with a shop-bought mouthguard who had both had teeth knocked out. Dr Paul Dunne and his team at Ballina Dental Practice then did something remarkable. They offered to provide a properly fitted dental mouthguard to every senior male and female player in Knockmore GAA Club – at no cost to the players or the Club. To achieve this the staff, who normally don't work on Friday afternoons, worked two Friday afternoons, taking impressions from three players every 15 minutes with fully staggered and Covid-19-compliant appointments. Over the two Fridays, 80 impressions were taken, and in the following weeks, all 80 players received their individually fitted mouth guard.

The judges' citation is:

For their commitment to the team players, to the Club members, and to their community, and for their work to help prevent serious dental injuries on the sports field, the team at Ballina Dental Practice is this year's winner of the Colgate Caring Dental Team of the Year Award.

Ballina Dental Practice

Standing (from left): Mary Dunne; Michael Crowley; Caroline Judge; Lorna McGowan; and, Clare Scanlon. Seated (from left): Anne Marie Flannery; Dr Paul Dunne; Elaine McDonnell; and, Brenda Walsh.

Bantry Dental
Dr Hannah Willsher.

Blackrock Dental
From left: Maria Teresa Galdinez; Lauren Merch; Dr Morgan O'Gara; Daphne O'Gara; and, Gillian Mullan.

Brews Hill Dental Centre
Back row (from left): Gary McDonnell; Niamh Ryan; Claire Conroy; Aisling Wright; and, Sophie Husband. Front row (from left): Dr Deirdre O'Dwyer; Sile O'Dwyer; and, Dr Conor Lynch.

Bridge Place Dental Practice
From left: Jane O'Loghlen; Dr Colm O'Loghlen; and Dr Susan Van Der Merwe.

Church Street Dental
Dr Roumaissa Slami.

Clear Dental Care Crumlin
Back row (from left): Dr Martha Keaney; Niamh Galvin; Rachael McGrath; Elina Vangas; and, Alisha Lindsey. Seated (from left): Eva Byrne; and, Dilara Sayan.

Cleary Fitzgerald Dental Practice
From left: Dr Eimear Cleary; Dr Maurice Fitzgerald; and, Dr Siobhan Cleary.

Cuddy Dental
Dr Roisin Meade and Patrick Cuddy.

Dame Street Dental
Back row (from left): Dr Michael O'Halloran; Dr Lisa Boland; Dusan Dumic; Dr Ksenija Zaporozceva; SarahJane Morris; Fran Moraes; Shannon Akkaoui; Bart Merz; Alannah Hargan; Miriam Prizeman; AmieeRose Willet; Rodrigo Mendoza; Teo Krucsay; Aiza Revazova; and, Dr Enea Nastri. Front row (from left): Sinead Louge; Amy Armour; Estefania Contreras; Kamran Raiysat; Bëibhinn Murphy; Dr Mohammed Shirin; Dr Lara Beatriz; Katie Halpin; and, Lorna Spaine.

Docklands Dental
Dr Ambrish Roshan.

Dr Claire McGrath & Associates
Dr Claire McGrath.

Expressions Dental & Cosmetic Clinic
From left: Dr Will Rymer; Dr Sarah Rymer; Ruth Hogan; and, Marie Meister.

Fee Dental
Brendan Smyth and Dr Bernadette Fee.

HSE Dental Services, Blackrock Hall
Back row (from left): Dr Susan Gibson; Elma Moore; Dr Sarah Tobin; Dr Carol Hassett; Dr Breda McGrath; and, Dr Kathy Fox. Front row (from left): Susan O'Donoghue; Michelle Daly; and, Paula Carroll.

Lucey Dental
From left: Elisha Kavanagh; Kiara Kennedy; Dr Lisa Lucey; Dr Alana Power; Aoibheann Coogan; and, Bethany Kaye.

Mac Domhnaill Dental
From left: Dr Róisín Boyle; Dr Marcas Mac Domhnaill; and, Dr Aoife Ní Chonchubhair.

Navan Orthodontics
From left: Jessica Artrong; Dr Christine Smith; and, Dr Sinead O'Hanrahan.

Orthodontics by Jackie
From left: Katie O'Riordan; Kate O'Connell; and, Lydia Cody.

Pembroke Dental Ballsbridge
Back row (from left): Dr Martha Keaney; Edi Regio; Helena Lawless; Alaa Alamery; and, Sydney Brown. Front row (from left): Danielle Hanney; Dr Rory Nolan; and, Dr Chloe Kelly.

Pembroke Dental Carlow
From left: Rashid Khalily; Dr Pavly Hanna; and, Dr Shah Nawaz.

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Peter Doyle Dental Centre
Back row (from left): Barbara Mulligan; Dr Zivile Nagumanova; Lorraine Taylor; Nicole McArdle; Eleanor Carroll; and, Shauna Hamrogue. Front row (from left): Geraldine Kennedy; Dr Peter Doyle; and, Lisa Kane.

Rathmines Dental
From left: Lynn McEniff; Dr Brian McEniff; and, Amy Deverell.

Seafield Dental
From left: Amie Horan; Dr Sitanna Ahmed; Graham Barry; Sarah Doyle; and, Dr Bronagh Keane.

Smile Hub Dental Clinic
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Smile Savers Dental
Dr Sonya Reilly and Dr Jerome White.

Smiles Dental Balbriggan
From left: Robert Wheelan; Dr Denny David; and, Dr Pawel Muszynski.

Smiles Dental Blanchardstown
From left: Dr Salma Naz; Egle Zilinskaite-Tiskuviene; and, Dr Meena Durai.

Susan Crean Dental & Facial Aesthetics
From left: Selina McCool; Dr Susan Crean; and, Daniel Hyla.

Tom Houlihan Orthodontics
Back row (from left): Mary Yu; Johanne O'Donoghue; Sandra Marshall; Valarie Lazarenco; Florina Boldijar; Nicole Mercado-Canapi; Aileen Carroll; and, Emma Whelan. Front row (from left): Maeve Fahy; Ana McNerney; Dr Catherine Houlihan; Dr Tom Houlihan; Dina Lazarenco; Marriane Budiongan; and, Demi Budiongan.

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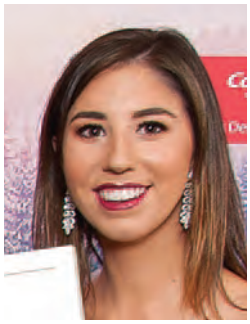
Cleary Fitzgerald Dental Practice

Dr Siobhan Cleary
Cleary Fitzgerald Dental Practice



Dr Oonagh Coughlan
Clear Dental Care

Dr Susan Crean
Susan Crean Dental & Facial Aesthetics

Dr Denny David
Smiles Balbriggan

Dr Michael Donnelly
Colm Smith Dental

Dr Peter Doyle
Peter Doyle Dental Centre/ Summerhill Dental Centre

Dr Paul Dunne
Ballina Dental Practice

Dr Meena Durai
Smiles Blanchardstown

Dr Bernadette Fee
Fee Dental

Dr Laura Fee
Smile Hub Dental Clinic

Dr Maurice Fitzgerald
Cleary Fitzgerald Dental Practice

Dr Bogdan Florea
Smiles Ballsbridge

Dr Tom Houlihan
Tom Houlihan Orthodontics

Dr Julia Juga Honorata
Toothwear

Dr Jennifer Huston
Callan Dental

Dr Bronagh Keane
Seafield Dental

Dr Martha Keaney
Clear Dental Care Crumlin

Dr Chloe Kelly
Pembroke Dental Ballsbridge

Dr Svetlana Kilgannon
Smart Dental

Dr Irene Lavin
Navan Road Dental Practice

Dr Aileen-Louise Logue
Dental Care Greystones

Dr Lisa Lucey
Lucey Dental

Dr Conor Lynch
Brews Hill Dental Centre

Dr Marcas Mac Domhnaill
Mac Domhnaill Dental

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Dr Claire McGrath & Associates

Dr Roisin Meade
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Dr Pawel Muszynski
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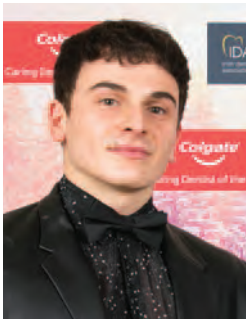

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Dr Colm O'Loghlen
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Dental Practice

Dr Morgan O'Gara
Blackrock Dental

Dr Sinead O'Hanrahan
Navan Orthodontics

Dr Ciara O'Reilly
Rathfarnham
Dental Practice

Dr Alana Power
Lucey Dental

Dr Nicolette Ravenscroft
Devereux Dental
and Orthodontics

Dr Sonya Reilly
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Dentistry – a family tradition

Dr Peter Cowan, right, tells the story of his family, which boasts four generations of unbroken tradition in dentistry, spanning over 120 years.

Alfred (Abe) and Elizabeth (Lib) Cowan.

It is hard to know where to begin when trying to tell the story of four generations of dentists from one family, spanning a period of over 120 years of unbroken tradition in Dublin. How a Polish man and a Russian woman met and married in Wasosz in northeastern Poland, settling first in England before finally coming to live in Ireland in the 19th century. For it was a twist of fate that the Reverend Israel Leventon, born in 1841 in Rajgrod, Poland, met and married Rosa Grymberg, who was born in Russia, eventually moving their growing family to live in Dublin – a family that included Julius Leventon, the first generation of this dental practice and my great-great uncle.[1-3]

With their older children, Israel and Rosa journeyed to England circa 1867, where Israel was to become Minister of the Leicester Hebrew Congregation. In 1874 they moved to Leeds, where their youngest child, Julius, was born in 1875. Julius's sister Annie, who was born 10 years earlier, would in time marry David Cohen, who was my great-grandfather. The Leventon family finally settled in Dublin in 1880, living first on the South Circular Road and then later, in 1888, in Longwood Avenue, Portobello. During this time, Israel would become Minister of the Adelaide Road Synagogue. Israel died in 1899 and Rosa in 1905.

A developing profession

The Baltimore College of Dental Surgery in the US opened in 1839 and by 1844 there were as many as 22 dental schools. In the UK, the Licentiate in Dental Surgery (LDS) was established in 1858 and by 1874 dentists could enter this examination from any part of England, not just from London, 'sinne curricula'. The Dental Act was established in the UK in 1878. Following this, the Council of the Royal College of Surgeons in Ireland (RCSI) petitioned the Crown for the authority to grant the LDS in Ireland, with the first dental examinations held here in 1878. The first Register of Dentists was set up in the UK in 1879. Of the initial 5,289 names, only 483 were LDS graduates and, of these, 110 were Irish. The vast majority of the initial cohort had not completed any formal examination process.[4]

The first dental hospital in Ireland was originally opened at 10 Beresford Place in 1876. Its aim was to provide clinical training for dental students and to supplement knowledge from the apprenticeship system heretofore used, by providing three years of training in dental mechanics and two years of teaching in anatomy, physiology, pathology, general hospital training and dental surgery. In 1884, with the dental school now in York Street, the RCSI appointed Theodore Stack as the first professor of dentistry in these islands.[5] A remarkable and highly qualified man, he indicated that his intention was to establish a school in which all subjects would be taught, and which would be worthy of the reputation that Dublin had established as a centre of excellence in medical education. Prof. Stack remained in this role until 1897, and helped to oversee the expansion and movement of the Dublin Dental Hospital from York Street to its current location in Lincoln Place in 1889.

Julius Leventon

Julius Leventon studied dentistry in the dental school at its new location in Lincoln Place. He completed his studies and qualified LDSRCSI in 1896 at the age of 21. However, it was not until 1900 that his name first appeared in the Dental Register in the UK. He was now living at 11 Harrington Street in Dublin, where his dental practice almost certainly commenced. The practice continued at this address until sometime between 1906 and 1911, when Julius's name appears in the Irish National Census as living at 19 Harcourt Street, Dublin.[6,7] This house, which would become the main setting for the practice for many years to come, was previously owned by Thomas Henry Longfield, an architect who had lived his whole life in number 19.[8]

The dental laboratory at 19 Harcourt Street circa late 1940s.

ABOVE RIGHT: My father, Adrian Cowan, in the study in Merrion Road.
RIGHT: Signature of Douglas Hyde, first President of Ireland (June 1938-June 1945) on practice notepaper, dated March 1945.

During these years, Julius married Kate Barnett (1902) and they had a son and a daughter. They continued to live, and Julius to practise, at 19 Harcourt Street until sometime between 1915 and 1920, when Julius and his family moved to 155 Finchley Road in north London. The Dentists Register in the UK has an entry in 1925 stating: "late Capt. Army Dental Service" – presumably Julius entered a period of service with the army and continued until his death in 1925.[9]

Alfred (Abe) Cowan

Julius's sister Annie married David Cohen – Annie and David were my great-grandparents on my father's side. One of their seven children – Alfred (born in 1889), or Abe as he was known by all – was my grandfather and Julius' nephew. Abe was the second generation of dentists in my family. The family name of Cohen was changed to Cowan in the early 1900s by Abe and his four brothers, as seems to have been the practice at that time for the many families that had emigrated from Eastern Europe to Ireland.

Abe was awarded LDSRCSI circa 1910 and worked with Julius in the practice in Harcourt Street before Julius moved to London. Abe married Elizabeth Nurock (or Lib as she was always called) and they had two children – Adrian (my father) and Anna. They must have acquired 19 Harcourt Street when Julius and his family moved back to London, as my father was born there in August 1919.

Although I was only 13 years old when my grandfather died, I still have many fond memories of him, my grandmother Lib and the house in 19 Harcourt Street, which was the 'home' of the practice for over 60 years. His surgery was a vast room at the front of the house overlooking Harcourt Street with tall windows allowing a lot of natural light. He had the most modern dental chair of its time, which could be pumped upwards by foot to raise it or, by pressing a lever, lowered back down to normal again. A similar chair sits in the front hall of the RCSI as a memory of the first dental school in Ireland – a school that was almost 100 years old when it eventually closed in 1976. The headrests and arm-pieces were adjustable and it was possible to tilt the chair backwards to improve vision. The dental light was a very large rectangular structure – quite different from what is commonly used today. There was a ceramic spittoon to the left of the chair built into the unit and a belt-driven conventional drill. It wasn't until the 1950s that the high-speed drill, driven by compressed air, was developed in New Zealand by John Patrick Walsh.

I remember as a child playing with the seat he used to sit on during surgery – if it was tilted backwards, it made a great steering wheel! I recall that the X-ray machine was an enormous black structure in the room – it seemed very foreboding. In those days, amalgam would have been mixed with a pestle and mortar, the resulting mass put into a piece of gauze, and the mercury squeezed out by dentist or assistant before the filling was placed in the tooth. Face masks and gloves would have been most unusual.

In the garden of number 19 was a large shed-like building, which housed the dental laboratory. I would spend many hours there as a child when visiting my grandparents, carefully moulding wax under the strict supervision of the dental technician, Tom Petherick, who wasn't much older than me as he trained with the senior man. It would have been very unusual to have a dental technician on site in any dental practice of that time, although I suspect the laboratory only started up when my father entered the practice in the late 1940s and 50s.

My grandfather continued to build up a strong and profitable general practice over the years. Of historical interest was the fact that one of his patients

happened to be Douglas Hyde, the first President of Ireland, whose signature is noted on the practice headed notepaper just before he finished his term of office.

My grandfather died of leukaemia in February 1968 and I always wondered if it was caused by exposure to radiation over the many years he was working. In those days, radiation exposure was not well understood, regulation was almost non-existent and the scatter from the X-ray machines of the day would have been much greater than today. As well as that, dentists often held the X-ray film for the patient during the exposure, increasing the potential risk. My grandmother Lib died in Dublin only a few years later in 1971.

Adrian Cowan

My father was born in August 1919 in Harcourt Street. Although he didn't know it, dentistry must have been in his genes and he would go on to become one of the most influential dentists of his time, both nationally and internationally.

Adrian (or Eddy as he was called) entered Trinity College in 1936 and qualified in dentistry in 1941 and in medicine in 1943, marrying my mother Phyllis in the midst of his studies in 1942. Prof. Rodney Dockrell noted in his obituary for my father[10] that he "almost absent-mindedly collected any loose prizes" along the way! He entered into dental practice with my grandfather at 19 Harcourt Street, rapidly building up a practice of patients who held him in high esteem, and a large body of colleagues who respected him throughout his life.

It is hard to know how he found the time to build up a busy practice, work and obtain the FDSRCSEng in 1950 (one of the first dentists in Ireland to do so), as well as starting the clinical dental research, largely into local anaesthesia, which led to a steady stream of publications, films, lectures, seminars, demonstrations, appointments to medical teaching hospitals, and service to learned societies. In addition, he was a part-time teacher and lecturer in the Dublin Dental Hospital and an examiner in the RCSI from 1951-1963.

When the RCSI established the Faculty of Dentistry in 1963, he was a founding Fellow and became its second Dean from 1966-69 – a position of which he was extremely proud. Indeed, the current position of the Fellowship owes much of its status to his unyielding work to ensure that standards were not only set high but steadily improved year on year.

He built up an international career, which contributed greatly to the current international regard for Irish dentistry. He was elected to Fellowship of both the American College of Dentists and the International College of Dentists, Membership of the Pierre Fauchard Academy, of the American Dental Association, and to the List of Honour of the Federation Dentaire Internationale (FDI) – the first Irishman to be so honoured. He Chaired the FDI's Commission on Dental Education, and in 1977 he was elected President of the Irish Dental Association to his great delight.

But it was his clinical practice that was the mainstay of his professional life. In 1969, after my grandfather passed away, the practice was moved from Harcourt Street to Merrion Road in Dublin – our family home and where I was born. My father constructed a superb, purpose-built, state-of-the-art facility onto the back of our house. It was from here that he continued to work until he retired in 1987.

He was an extremely skilful clinician and worked in what would now be considered a specialist restorative practice providing the highest quality periodontal and prosthodontic treatments of his time. Intermixed with all of these aspects of his professional life, he also carried out minor oral surgery lists in a number of hospitals on a weekly basis. Towards the end of his career, I was very fortunate to work alongside him in theatre when we would do lists of third molar surgery under general anaesthesia together. My abiding memory of him professionally was his gentle and immaculate handling of tissue – something that cannot be learnt from a book. For this I will always be grateful and hope that I have passed on some of these traits to my own students over the years.

If all of this is not remarkable enough, as a father, he was simply unique both to me and my three siblings. We were blessed to have two loving and caring parents who complimented each other – one of my sisters commented that they were two sides of the same coin – my father wise and gentle, my mother strong and vibrant!

One of my father's students, David Harris, married my sister Pam, who is an artist. My other sister Gilly (who sadly died in 2012) was also an artist and married a doctor, while my brother David had a long career as an airline pilot. It seems the dental genes passed on to me!

Peter Cowan

I was born in June 1955 in Merrion Road in Dublin – the youngest of four children. Growing up in an Orthodox Jewish household was both fascinating and beneficial in many ways – one of which was that as children, we were able to take both the Jewish holidays and the regular Christian holidays during the

school year! I was also lucky to have grown up in the fabulous 1960s when everything in the world began to change – music, culture, fashion, politics and space travel, to name but a few. I suspect that my love of music came both from my Semitic background in general and my mother in particular, who was a gifted musician when she was younger. Of course, growing up in the 60s opened up a whole new style of musical genres with the music of the Beatles, the Stones, Dylan, Donovan, David Bowie, Pink Floyd and too many more to mention here. In my teens and early 20s I played the drums (badly) in a rock band, and if I hadn't started my career in dentistry, I would probably have dabbled in the music world, most likely to no avail!

My other great passion was tennis and from the age of four, I have played this great game competitively throughout my life, meeting and making many of my closest friends along the way. Indeed it was on a tennis court by complete chance that I was lucky enough to meet my now wife Siobhan. We married in 1991 and have three wonderful children – Josh, Lia and Ben – all of whom have chosen very different but successful career pathways! It seems the dental line will stop with me, although my nephew Michael Freedman (who worked in the practice for a few years after he qualified) will to an extent continue it, albeit within his own specialist practice.

Dentistry, however, was always in my blood and in my psyche. My father had a huge influence on me to this end, although never a demanding one. I was a keen observer of his professional life as I grew up, how he managed to juggle this with our family life, and this led me to the conclusion that there was only one career for me. I remember how proud I was of him when he and my mother were dressed for the RCSI Faculty dinners when he was Dean – all of these factors influenced my younger self and I have never regretted those choices for one second.

I graduated from Trinity College Dublin in 1978 and, having completed Primary Fellowship and a year as a houseman in the Dublin Dental Hospital (DDH as it was then), moved to work in London for a year before returning to Dublin to join the practice in 1980 and work part-time in the DDH as an SHO and later Registrar in Oral Surgery. I completed FDSRCSEdin in 1981 and I was one of the first to complete the new specialist FFDRCSIrel in Restorative Dentistry in 1984.

I always enjoyed teaching and continued this on a part-time basis in the DDH until 1991, but during this period I also became involved in the Faculty of Dentistry, RCSI in 1987 – joining the Board as Hon. Sec. Although my father had retired from the practice in 1987, there was still much to learn from him about committees and college life in RCSI, for which I was very grateful. I was elected Vice-Dean and then Dean of the Faculty of Dentistry (2001-2004) – the singular honour of my professional life. To this day, I believe that in the College's illustrious history of over 200 years, we were the first father and son to both be elected Dean of a Faculty – something of which I am very proud. Following my Deanship, I spent three years as Director of Dental Affairs, RCSI, before becoming Chief Executive Officer of the Faculty of Dentistry from 2007-2018. Over the years in RCSI, I was fortunate to have been part of strong team that firmly established the Faculty's role in postgraduate dental education both at home in Ireland and internationally, chiefly in the Middle East, North Africa, Sweden and the USA. These roles in the College afforded me the opportunity to work throughout my professional life in a way that combined my love of clinical practice with postgraduate teaching and education, both of which I still enjoy to this day.

Although I have always regarded the RCSI as my academic home, my clinical home has always been my practice. Having developed a love for both oral surgery and restorative dentistry early on in my career, the practice has allowed me to continue to build on the work of the previous generations. In 2004, I moved the practice from Merrion Road to Pembroke Road in Dublin, where I am currently practising. I am most fortunate to have a very loyal group of patients who have continued to attend my surgery over the years. There are still a very small few who were patients of my grandfather and a greater number who were patients of my father, and all speak of them both in glowing terms! I can certainly recognise my father's work in patients' mouths as he had a particular style of carving his amalgam fillings or his crown or gold inlay restorations, many of which are still going strong 40-50 years later!

Dentistry has moved forward in leaps and bounds over the past 120 years from the days of minimal local anaesthesia to today's world of painless dentistry – where technology allows us to place tooth-coloured bonded resin fillings and all-ceramic crowns. Where implant-supported restorations for missing teeth are now the norm instead of removable dentures, and where autogenous or synthetic bone materials are now commonly utilised to supplement deficient areas of the alveolus to improve outcomes. Where surgical manipulation of the jaws to correct deformity is now not only possible but routine in some instances. What would my great-great uncle Julius have made of these wonderful advances if he were alive today? I have no doubt he would have been proud to have been the founder and a part of four generations of unbroken tradition in dentistry in Dublin, spanning over 120 years and counting. I know I am very lucky to have been born at the right time and in the right place to be able to have played a small part in carrying on the successful practice of this unique group of men.

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Have you a story of interest?

The Irish Dental Association will be celebrating its centenary in 2023 and as part of its programme it has commissioned Dr Eoin Kinsella to research and write a comprehensive history of the Association for publication in early 2023. The history will span the entire century of the IDA's existence. Eoin is anxious to hear from members of the Association, past and present, who have material in their possession that might shed some light on its past. Can you help? Do you have old photos of IDA events, or documents relating to the Association's activities, its policies or its social events, that you would be willing to share with Eoin? If so, he would be delighted to hear from you. You can reach him by emailing eoinkinsella@gmail.com.

Necrotising periodontal diseases

Précis: This article is the first in a new series that aims to provide brief revision of individual conditions that present management challenges in clinical dental practice. This article overviews the aetiology, clinical features and management of necrotising gingivitis. An illustrative case example is used and recommendations for further reading are also provided.

Table 1: Overview of key aspects of NG.

Diagnosis	Usually based on clinical findings alone, specifically the acute onset of symptoms and three key signs: pain, interdental ulceration, and bleeding
Prevalence	<1% of the general population[1,2]
Microbiology	Dominated by anaerobic bacteria; characterised as "fuso-spirochaetal infection"[3] Predominant species: *Fusobacterium* spp., *Treponema* spp., *Selenomonas* spp., *Prevotella intermedia.* Other bacterial species may be variably present. In HIV-affected patients, *Candida albicans* and herpes viruses also noted.
Histopathology	Necrotic lesions can be characterised by several zones,[4] oriented as follows (from superficial to deep): Bacterial area – neutrophil-rich zone – zone of necrosis – spirochaetal infiltration zone
Contagion potential	Increased NG prevalence has been noted in certain groups (e.g., soldiers, students, HIV patients). However, this increased prevalence is thought to be due to shared characteristics and NG is not identified as a contagious disease[5]
Differential diagnosis	▸ Periodontitis ▸ Infectious conditions: (herpetic gingivostomatitis; syphilitic lesions, tuberculosis lesions) ▸ Desquamative gingivitis/lichen planus ▸ Vesiculobullous conditions (e.g., pemphigus) ▸ granulocytosis

Introduction

Necrotising periodontal diseases (NPDs) are a group of infectious diseases that include necrotising gingivitis (NG), necrotising periodontitis (NP) and necrotising stomatitis (NS). These three clinical presentations may represent different stages of a continuum of the same disease process, with shared aetiological factors, and broadly similar initial clinical features and treatments. The term 'ulcerative' is no longer used in classification as ulceration is considered secondary to the gingival necrosis present.

NP may result in destruction of periodontal ligament and supporting bone, while in NS, destruction progresses to deeper tissues such as the lip, cheeks and tongue. These presentations are more frequently seen in patients with HIV/AIDS or other systemic/immune compromise and, in developing countries, among those with severe malnourishment, respectively. In an Irish context, NG will represent the most common clinical form seen in general dental practice and may present as an acute condition requiring urgent management. Consequently, the current review will focus on NG. **Table 1** provides an overview of the key aspects of NG.

Clinical presentation

The clinical presentation of NG incorporates three primary features of near universal presence, and a number of secondary clinical features **(Table 2).** NG is usually localised to one or a few teeth, but can be more widespread. Lesions most commonly involve the tip of the interproximal papilla but may spread to affect the entire papilla. A smaller number of cases (estimated one in five) will also involve marginal gingiva, with a few cases extending to involve attached gingiva or mucosa.[6] A number of non-specific predisposing factors for NG are noted, as outlined in **Table 3**.

Dr Eamonn Donohoe
Dental Associate,
Private Practice
(Lead Author)

Dr Jamshaid Butt
Dental Associate,
Private Practice

Dr Peter Harrison
Associate Professor
Division of Restorative
Dentistry & Periodontology,
Dublin Dental
University Hospital
E: Peter.Harrison@dental.tcd.ie

Table 2: Necrotising periodontal diseases – clinical findings.

	Primary clinical features
Pain	Usually of rapid onset; varying severity
Gingival necrosis	Interproximal tissue most commonly affected Ulceration may occur secondary to necrosis; if present, crater-like depressions may appear, giving rise to the characteristic 'punched-out' appearance of papillae
Gingival bleeding	Occurs with minimal provocation
	Secondary clinical features
Generally present	Halitosis (foetid in nature) Formation of pseudo-membrane
Sometimes present	Lymphadenopathy Fever Interdental gingival craters Bad taste (often metallic) Increased salivation

Table 3: Predisposing factors for NG.

General	Dental
Young age	Poor oral hygiene (OH)
Immunosuppression/ systemic disease	Pre-existing gingivitis
Smoking	Previous NPD history
Alcohol	Local factors predisposing to plaque (e.g., tooth malalignment)
Stress	
General debilitation	
Poor diet/malnutrition	

Clinical impact

- NPDs may be acute presentations in dental practice, most commonly among a young clientele who are not 'typical' periodontitis patients, and must be identified and managed effectively to address pain.
- Recurrence is common, and since clinical attachment loss may be evidenced even in cases diagnosed as NG,[7] NPD may have a longer-term impact on the patient's treatment needs.

The 2017 World Workshop on Classification recognised that: (i) the extent of disease; and, (ii) risk of progression to more severe conditions, may be

significantly different depending on the predisposing conditions present and the level of systemic compromise experienced by the individual,[8] and consequently proposed modifications to the classification of these diseases. Therefore, patients with NPDs who suffer a longer-term systemic compromise such as severe malnutrition or HIV/AIDS may undergo a more severe disease course, with greater risk of recurrence and/or progression to NP or NS. Conversely, the risk of recurrence and progression may be lower in most patients who present in a general dental practice setting with common predisposing factors. Nevertheless, if these patients have pre-existing periodontitis and/or risk factors cannot be effectively controlled, the possibility of NG progressing to NP may be elevated.

Management

Management of NG includes measures to address both the immediate/short-term and longer-term aspects of the clinical condition.[9]

Immediate/short-term

Aims:

- alter disease course/limit tissue destruction; and,
- address patient discomfort/ acute symptoms.

Includes:

- **manage associated pain;**
- **education:** advise patient about the clinical condition, its clinical course and the need to address predisposing factors;
- **initial instrumentation**: gentle supragingival debridement to remove plaque biofilm and necrotic tissue debris; powered devices (e.g., ultrasonic scaler) are generally recommended as irrigation may facilitate deposit removal; minimise physical trauma to the ulcerated gingival tissues; nevertheless, some minor bleeding is common following instrumentation;
- **personalised oral hygiene instruction (OHI):** the patient may be supplied with an extra-soft toothbrush to facilitate removal of plaque and necrotic tissue with minimal trauma; when brushing, the patient may use water/mouthrinse only to avoid irritation of ulcerated areas; as symptoms improve, mechanical techniques should be adapted and interproximal oral hygiene (OH) reintroduced;
- **chemical OH agent:** prescribe a mouthrinse for use during the period when mechanical OH is difficult/painful; chlorhexidine digluconate (CHX 0.12-0.2%, minimum twice daily) is most commonly prescribed for up to 14 days; it may be practical to supply the patient with a monoject syringe to simplify irrigation of the affected sites;
- **+/- antimicrobials:** prescription of an antimicrobial agent is appropriate where signs suggest systemic involvement (e.g., fever, lymphadenopathy); metronidazole significantly reduces the associated species[3] and is the agent most frequently advocated; dosage regimen (200mg/400mg) and duration (three to seven days) is somewhat equivocal in the literature; these authors most commonly recommend initial dosage of 200mg three times daily for three days; and,
- **regular follow-up:** the patient should be followed up closely in the early days post treatment (e.g., 48 hours and one week), to monitor the disease course and facilitate further removal of biofilm and necrotic debris as patient comfort permits.

Longer-term

Aims:

- address predisposing factors;
- prevent disease recurrence; and,
- provide corrective therapy where relevant.

Includes:

- **treatment of underlying periodontal conditions:** once the acute phase is under control, any required periodontal treatment should be commenced;
- **additional patient education and OHI:** modified as appropriate to achieve secondary prevention of plaque biofilm;
- **address predisposing factors:** general predisposing factors should be modified where feasible and local factors predisposing to plaque accumulation (e.g., restoration overhangs) addressed; advise the patient that NPD may recur if predisposing factors are not addressed;
- **+/- corrective treatment:** NG may alter gingival tissue contours, potentially resulting in cratering of interproximal papillae that may favour plaque accumulation; while corrective surgery is not generally required, gingivectomy and/or gingivoplasty may be used to treat superficial craters, while periodontal flap surgery may be used in severe cases; and,
- **supportive periodontal care:** enrol the patient in regular recall, based on individual risk profile for periodontal disease/NG recurrence.

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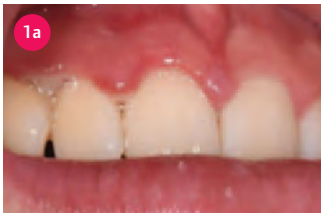
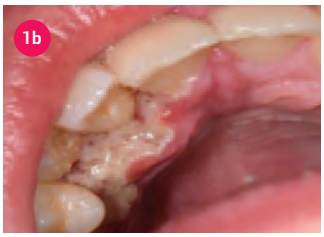
Illustrative clinical case example

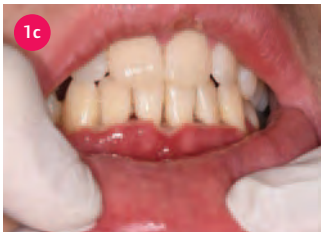
The case below illustrates the management of NG in a healthy 18-year-old male patient presented to the A&E department at Dublin Dental University Hospital complaining of a two-day history of "gum infection" that was painful to touch and described as feeling "like something is eating into my gums".

CLINICAL PRESENTATION

- The gingivae of the maxillary and mandibular anterior sextants were red and tender, with spontaneous bleeding present.
- Principal source of pain was the 1.3-1.2 area, where labial (**Figure 1a**) and palatal (**Figure 1b**) gingival necrosis, gingival bleeding and formation of a pseudo-membrane were noted.
- The mandibular inter-canine region (3.3-4.3) demonstrated labial gingival erythema and loss of tissue tone. Interproximal papillae were ulcerated with 'punched-out' appearance. Papillary tips demonstrated a necrotic surface with formation of a pseudo-membrane (**Figure 1c**).
- Oral hygiene (OH) was fair.
- The patient had a slightly elevated temperature and lymphadenopathy.







FIGURES 1a-1c: Initial clinical presentation demonstrating gingival necrosis and formation of pseudo-membrane at 1.3-1.2 region: (a) labial; and, (b) palatal. A 'punched out' appearance of the interproximal papiallae was evident at 3.3-4.3 region.

PREDISPOSING FACTORS

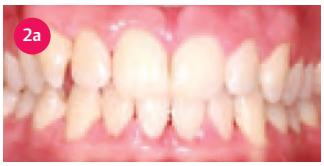
- Stress: recent close family bereavement and upcoming college examinations.
- Smoking: the patient admitted to smoking tobacco and occasionally marijuana to address his stress.
- Diet/nutrition: poor diet since his family bereavement with main daily meals limited predominantly to fast foods.

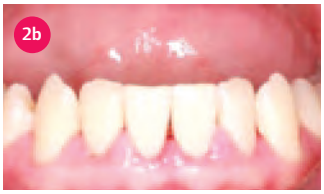
IMMEDIATE MANAGEMENT

- Patient was educated about NG and its predisposing factors.
- Patient was advised regarding appropriate analgesia.
- Detailed, personalised OHI was provided. The patient was supplied with an extra-soft toothbrush and monoject syringe to facilitate gentle OH.
- Affected areas were irrigated with chlorhexidine (CHX) to remove necrotic tissue debris and biofilm. Gentle tooth debridement was performed.
- The patient was prescribed CHX mouthrinse and metronidazole per protocol.

LONGER-TERM MANAGEMENT

- The patient was scheduled for further recall appointments over the following week. Each visit included gentle supragingival instrumentation and adaptation of the OH regimen based on the evolving clinical condition.
- Supportive periodontal care was provided (three-monthly recall) over a subsequent period of one year. As he demonstrated effective OH at each visit and no recurrence of NG, the patient was discharged back to his GDP.
- Healing occurred with relatively favourable gingival tissue tone and contour (**Figure 2a-c**). No surgical tissue recontouring was required.
- Despite counselling on cessation of his tobacco and marijuana smoking habits, and the importance of a balanced and healthy diet, the patient struggled to address these predisposing factors. Consequently, the GDP was advised to monitor the gingival condition regularly and the patient was advised on the potential for NG recurrence.





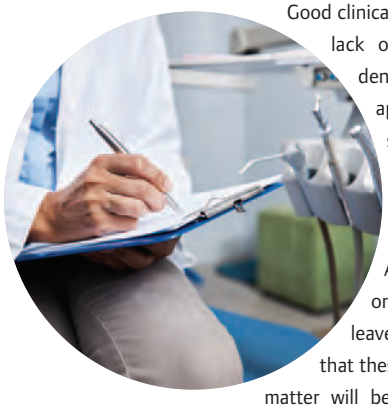
FIGURES 2a-2c: Clinical presentation of affected areas at start of 12-month supportive periodontal care appointment.

Vulnerable areas:
an analysis of Dental Protection cases

Dental Protection's recent 'Learning from Cases' report highlights the key areas that generated claims for compensation between January 2018 and December 2020.

This article explores a sample of the cases reviewed and identifies vulnerable areas in record keeping, consent, assessment and treatment planning, and radiographic practice, any of which can lead to difficulty defending a claim.

Record-keeping issues

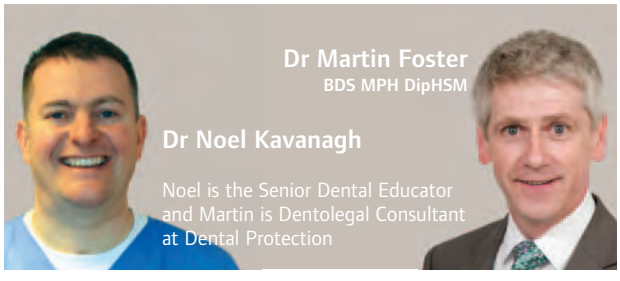


Good clinical records are the dentist's best defence. A lack of systematic, detailed notes leaves a dentist vulnerable to allegations that the approach to treatment was not properly structured, or adequately planned and executed.

The difficulty for any clinician is the lack of evidence of the standard of their care. A failure to record investigations, findings, or giving advice and warnings to a patient, leaves the clinician exposed to accusations that these were not carried out appropriately. The matter will become a contest between the patient's version of events and that of the dentist. Given that patients are in the surgery far less than any dentist, in a dispute a patient's recollection of an event could be perceived to carry more weight than the dentist's if there is no detailed documentation.

It is also important to remember that a significant proportion of claims arise several years after treatment was provided, when recollection of events will inevitably be compromised. Commonly overlooked areas include:

- presenting symptoms – nature, site, findings, diagnosis;
- discussions and consent process – risks, benefits, alternatives, prognosis, costs, etc.;
- structured treatment plans;
- failure to record periodontal screening indices, e.g., basic periodontal examination (BPE) scores;
- failure to provide appropriate advice, e.g., oral hygiene/diet/smoking cessation;
- specific measurements – working lengths, pocket depths, mobility;
- radiographic details – rationale for exposure, report, findings;
- antibiotic prescribing rationale;
- informing patients of adverse events, e.g., file fracture, retained root; and,
- post-op instructions or advice given.



Dr Martin Foster
BDS MPH DipHSM

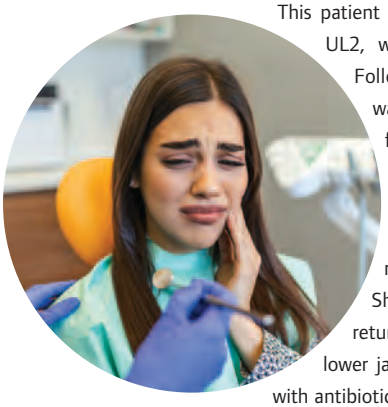
Dr Noel Kavanagh

Noel is the Senior Dental Educator and Martin is Dentolegal Consultant at Dental Protection

Key learning points

- Records commonly lack detail that can be important;
- the reason why treatment was carried out, as well as what was done, should be recorded; and,
- records need to be contemporaneous – non-contemporaneous additions need to be clearly identified as such.

CASE 1 – alleged unnecessary treatment and failure to investigate pain



This patient presented with an unrestorable UL2, which was extracted by Dr B. Following this, further treatment was provided over the course of five appointments, during which a total of 13 existing amalgam restorations were removed and replaced with composite restorations.

Shortly afterwards the patient returned complaining of pain in the lower jaw, which was initially managed with antibiotics and painkillers, before referral to a facial pain specialist to investigate possible trigeminal neuralgia. The patient later advised that they had attended elsewhere for root treatment at LR6, which had addressed their symptoms.

A claim was raised alleging failure to adequately investigate and diagnose the source of pain, as well as providing unnecessary treatment.

The records gave no indication of why the restorations had been replaced, why treatment was necessary, what advice had been provided, or if any consent process had been followed. No intra-oral radiographs were taken at any point

and the referral to the pain specialist was made without any evidence showing appropriate investigation of possible dental causes.

Breach of duty was established based upon the lack of evidence that the treatment was indicated, or that the expected level of care had been taken when assessing the clinical presentation.

Key learning point

- The rationale for treatment decisions must be clear from the information in the clinical records – it is important to show not just what was done but why.

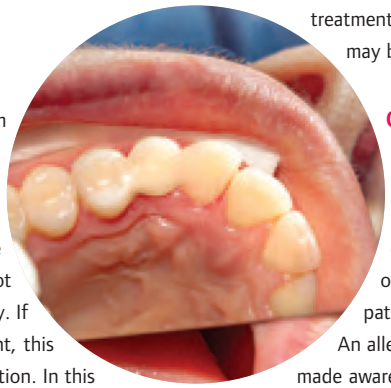
CASE 2 – alleged cause of facial pain

In this case, the dentist provided fixed bridgework from UR3 to UR6 to restore the space created by the loss of UR4 and UR5. The patient later developed facial pain, which was allegedly caused by the member's treatment.

Cases involving 'atypical' or 'neuropathic' pain can create difficulties as, by the nature of this condition, it is not always possible to ascertain the precise mechanism at play. If there is any suggestion of fault with the dental treatment, this can lead to blame being attributed to the dental intervention. In this case, the dentist's records were detailed, and it was clear that the approach to assessment, treatment planning and technical execution had been both appropriate and systematic. There was no fault with the treatment and the claimant was unable to provide any evidence linking the onset of symptoms and the treatment. The claim was dropped.

Key learning point

- Claims can arise from issues that are not linked to the treatment provided – it is important to be able to produce evidence of the quality of treatment to prevent any suggestion of substandard work that may be implicated.



Consent issues

A lack of evidence of a consent process is a vulnerability in cases of all types. This exposes the dentist to allegations of a breach of duty, which are then difficult to defend against. Often, there are inadequate or no records of any discussions with the patient – even though the patient had been advised of options and warned of risks.

An allegation seen in many claim letters is: "Had our client been made aware of the limited prognosis for treatment at the start, then

they would not have proceeded with treatment".

Consent is an ongoing process and should be revisited if there are any proposed changes to the original treatment. For elective treatment particularly, detailed documentation of the consent process is of paramount importance. A consent form can be an adjunct to a record entry but does not remove the need for recording the process in the notes. Forms should not be relied upon alone. Any forms used need to be relevant to the specific risks for that individual patient. Without a documented consent process, including discussions with the patient regarding treatment options, alternatives, advantages and disadvantages, limitations, risks, prognosis of proposed treatment and costs, there will be little prospect of successfully contesting a claim.

Pre-op assessment/treatment planning issues

Another significant danger area arises in relation to case assessment. If the clinician's grasp of the clinical situation is not accurate, this will undermine the prospect of a successful outcome, and create both clinical and dentolegal risk. Insufficient attention to pre-operative case assessment and treatment planning can lead to difficulties, which a more careful approach could have avoided.

A robust pre-op assessment helps to ensure that there is a clearer understanding of the clinical picture, including possible complications, and will put the clinician in a position to more accurately judge if the treatment is within their competence and experience before proceeding.

It is important that the patient's expectations are realistic and aligned with the clinical findings and potential treatment outcomes.

Sometimes it may be necessary to reconsider and revise treatment plans, e.g., in light of a tooth becoming non-vital, is it still suitable as a bridge abutment or does the plan need re-evaluation? Common failings seen in claims include:

- failure to adequately assess and advise on the condition of teeth pre-operatively;
- inadequate investigations/special tests/diagnostics;
- using and relying upon inappropriate radiographs for assessment;
- failure to identify the most appropriate approach to address clinical presentation;
- periodontal condition not recorded;
- failure to stabilise dentition before proceeding with complex treatment; and,
- failure to assess abutment teeth radiographically, periodontally, etc.

CASE 3 – case assessment and consent issues

Dr A. placed five implants in the upper arch to support fixed anterior bridgework. Two months later the two implants on the right side became loose. The bridgework and the two failed implants were removed. The patient shortly afterwards attended another practice for further treatment.

The legal claim alleged that the patient had suffered pain and infection, along with psychological trauma. Compensation was sought in addition to the costs of remedial treatment. The allegations also included failure to obtain valid consent.

Implants can fail for a variety of reasons, so this risk needs to be clearly conveyed. The vulnerabilities in the case included a lack of adequately documented consent. The clinical assessment was poorly recorded with no evidence of a structured approach. Breach of duty was established from being unable to demonstrate that appropriate care was taken in planning the treatment and advising the patient.

Key learning points

- When providing complex restorations, records must demonstrate thorough assessment, treatment planning and consent; and,
- accurate information is at the heart of consent – a failure to record that an adequate and appropriate assessment was undertaken will undermine any argument that consent was valid.

Radiographic issues

Radiographs and scans are an element of cases that can create problems either through not being taken when they should be, being taken badly, or not being examined or reported on. Common weaknesses with radiographs and scans include:

- poor positioning or poor diagnostic value or quality;
- findings not recorded/reported/acted upon;
- no X-rays taken for RCTs; and,
- inappropriate use of OPGs (magnification distortion).

The findings on a radiograph or scan should be recorded, since this information is part of the clinical assessment. It is important to record the rationale for taking radiographs and report the findings. Make sure you use the appropriate radiograph for the clinical situation and use good technique (e.g., positioning) to maximise diagnostic yield. You should observe recognised guidelines for dental radiography, e.g., indications and/or frequency.

By exploring the common pitfalls and themes that result in a claim, and the lessons that can be learned from them, dental professionals can feel empowered to take preventive and precautionary steps to reduce the likelihood of claims, and feel confident that when claims do arise, they can be defended successfully.

Dental Protection's 'Learning from Cases' report is available from: https://www.dentalprotection.org/ireland/publications-resources/articles/article/learning-from-cases—-the-claims-landscape-for-dentists-in-ireland.

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Perceptions of general dental practitioners in Northern Ireland on the clinical management of patients taking direct oral anticoagulants

Précis: Most general dental practitioners in Northern Ireland are aware of the Scottish Dental Clinical Effectiveness Programme guidance on management of patients taking anticoagulants or antiplatelets, but require additional training and support to prevent inappropriate referrals.

Abstract

Statement of the problem: Despite guidance advocating the management of patients taking direct oral anticoagulants (DOACs) in primary dental care settings, evidence from clinical audit in Northern Ireland suggested that a high proportion of patients were being referred to secondary and tertiary care settings for dental procedures with a bleeding risk.

Purpose of the study: The aim of this study was to evaluate the perceptions of general dental practitioners (GDPs) working in the health service in Northern Ireland on the clinical management of patients taking DOACs in primary dental care.

Materials and methods: A questionnaire was distributed to the 1,167 registered GDPs in Northern Ireland, assessing perceptions of the clinical management of DOAC patients in primary dental care. The data obtained was analysed using SPSS statistical software. Qualitative data underwent thematic analysis.

Results: A total of 344 questionnaires were analysed. Some 83% (285) of responding GDPs were aware of the Scottish Dental Clinical Effectiveness Programme (SDCEP) guidance. Some 98% (337) believed that patients taking DOAC medication could potentially be managed in primary care but that additional training was required. Some 80% (275) of GDPs had referred patients to secondary care. Procedures presenting a low risk of postoperative bleeding complications accounted for 12% (41) of referrals.

Conclusions: A lack of GDP confidence and experience in the management of DOAC patients are motivating factors in referral to secondary care settings for treatment. Some 12% of the referrals analysed were potentially inappropriate, given the low risk of associated postoperative bleeding complications. Additional training and support for GDPs, as well as enhanced awareness of the SDCEP guidance, is essential.

Key words: NOACs, DOACs, SDCEP guidance, anticoagulants, bleeding risk, GDP, primary care

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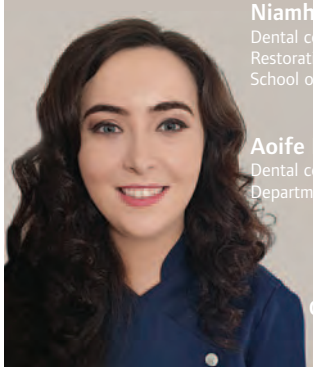

Niamh Kelly
Dental core trainee, Restorative Dentistry Department, School of Dentistry, Belfast

Aoife Nic Iomhair
Dental core trainee, Restorative Dentistry Department, School of Dentistry, Belfast

Stuart Hill
Undergraduate student, Masters of Pharmacy, School of Pharmacy and Pharmaceutical Sciences, Ulster University, Coleraine

Gerry McKenna
Clinical Reader/Consultant in Restorative Dentistry, Centre for Public Health, Queen's University Belfast

Donncha O'Carolan
Regional Lead GDS and Governance, Western Office HSCB, Gransha Park House, Derry

Gerry Cleary
Dental Advisor, Western Office HSCB, Gransha Park House, Derry

Kathryn Burnett
Professor of Pharmacy Education, School of Pharmacy and Pharmaceutical Sciences, Ulster University, Coleraine

Corresponding author: Niamh Kelly, Restorative Dentistry Department, School of Dentistry, Royal Hospitals Site, 274 Grosvenor Road, Belfast, BT12 6BA. E: nkelly41@qub.ac.uk

Introduction

Thromboembolic disease constitutes a leading cause of mortality and morbidity worldwide.[1,2] Anticoagulants are an essential tool in the management of patients with thromboembolic disease due to their role in preventing the blood hypercoagulability that plays a central role in thrombogenesis.[3]

A number of disadvantages associated with traditionally used oral anticoagulants such as vitamin K antagonists (VKAs) led to the development of direct oral anticoagulants (DOACs), also known as novel oral anticoagulants (NOACs), first introduced to the UK in 2008.[2,4] DOACs are also referred to as target anticoagulants, as they directly inactivate thrombin Factor lla (FIIa) and Factor X (FXa).[5] DOACs offer several advantages over VKAs: they are administered in standard doses; they eliminate the need for dose titration and laboratory monitoring; they have a rapid onset and offset of action, as well as increased predictability; and, they have a lower incidence of major bleeding.[5] There are currently four DOACs licensed for use in the UK: dabigatran, apixaban, edoxaban and rivaroxaban.[6]

Patients taking DOACs present an increased risk of bleeding during and following invasive dental procedures. The Scottish Dental Clinical Effectiveness Programme (SDCEP) published a guidance document in 2015 on 'Management of Dental Patients Taking Anticoagulant or Antiplatelet Drugs'.[7] This guidance includes advice on new-generation anticoagulants and antiplatelets, including DOACs, for oral health professionals within primary dental care. The SDCEP guidance advocates the management of patients taking DOACs in primary dental care, using procedure-specific bleeding risk to inform the need for alteration of the DOAC dose. The guidance outlines a number of measures to reduce the risk of postoperative bleeding, including planning treatment for morning clinics at the beginning of the week, the use of local measures, an atraumatic technique, and the importance of a detailed medical history to prevent postoperative bleeding problems.[7] This guidance has been endorsed by the Department of Health (DoH) in Northern Ireland. Dental procedures unlikely to cause bleeding, those with a low risk of postoperative bleeding complications, and those with a high risk of postoperative bleeding complications according to the SDCEP guidance are outlined in **Table 1**.[7]

Despite the recommendations of this guidance, evidence from clinical audit suggested that a high proportion of patients taking DOACs within Northern Ireland were being referred to secondary care settings for dental procedures with a bleeding risk. Previous evidence has suggested that a number of factors, including a lack of undergraduate oral surgery experience among recently qualified GDPs, as well as increasing numbers of patients retaining natural teeth against a background of complex medical histories and polypharmacy, can contribute to such referral patterns.[8] A survey of dentists in the Greater Manchester area found that 69% of respondents made a referral to secondary care services based on anticipated surgical difficulty, while 49% referred based on the complex nature of a patient's medical history, including DOACs.[9,10]

The aim of this study was to evaluate the perception of GDPs in Northern Ireland on the management of patients taking DOACs in primary dental care, including their awareness of the SDCEP guidance and the factors influencing referrals to secondary care settings. Ethical approval was granted by the School of Biomedical Sciences Ethics Filter Committee at Ulster University.

Materials and methods

Inclusion and exclusion criteria

The target population for this study included GDPs on the Northern Ireland dental list. Secondary care and private dental practitioners were excluded as the project related to health service referrals.

Data collection

A questionnaire was designed to obtain quantitative and qualitative data from GDPs on their perceptions of managing DOAC patients in primary dental care, their awareness of the SDCEP guidance, and the factors influencing referrals. The questionnaire was initially piloted with dental and pharmacy staff at the Health and Social Care Board (HSCB) Northern Ireland, subsequently edited and then distributed to all 1,167 GDPs on the Northern Ireland dental list, with a cover letter containing instructions and information about the study. A stamped addressed envelope accompanied the questionnaires to facilitate their

Table 1: Postoperative bleeding risk classification for dental procedures as per SDCEP guidance on 'Management of Dental Patients Taking Anticoagulants or Antiplatelet Drugs'.

Dental procedures that are **unlikely to cause bleeding**	Dental procedures that are **likely to cause bleeding**	
	Low risk of postoperative bleeding complications	**Higher risk of postoperative bleeding complications**
Local anaesthesia by infiltration, intraligamentary or mental nerve block	Simple extractions (one to three teeth, with restricted wound size)	Complex extractions, adjacent extractions that will cause a large wound, or more than three extractions at once
Local anaesthesia by inferior dental block or other regional nerve blocks	Incision and drainage of intra-oral swellings	Flap-raising procedures: ▸ elective surgical extractions; ▸ periodontal surgery; ▸ pre-prosthetic surgery; ▸ periradicular surgery; and, ▸ crown lengthening.
Basic periodontal examination (BPE)	Detailed six-point full periodontal examination	Dental implant surgery
Supragingival removal of plaque, calculus and stain	Root surface instrumentation (RSI) and subgingival scaling	Gingival recontouring
Direct or indirect restorations with supragingival margins	Direct or indirect restorations with subgingival margins	Biopsies
Endodontics – orthograde		
Impressions and other prosthetics procedures		
Fittings and adjustment of orthodontic appliances		

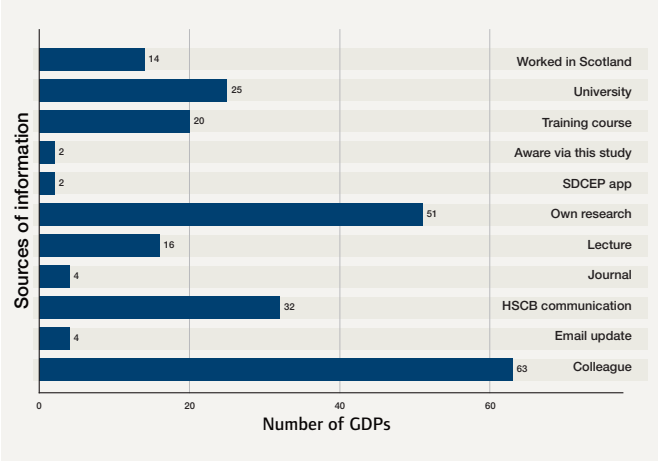

FIGURE 1: Range of sources by which GDPs became aware of the SDCEP guidance for managing DOAC patients in primary care.

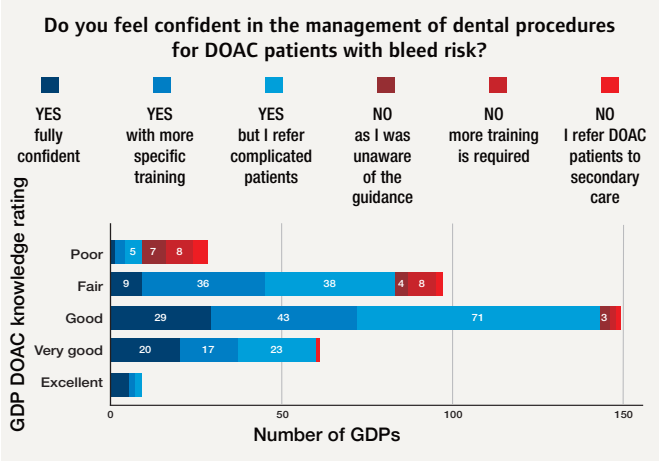

FIGURE 2: Comparison between GDP DOAC knowledge rating and their confidence in the management of dental procedures for DOAC patients with a bleeding risk in primary care.

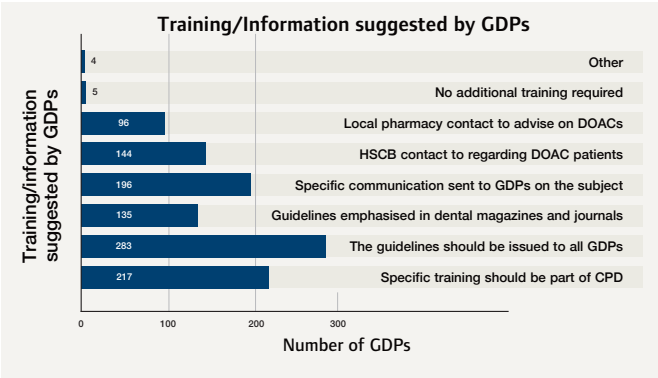

FIGURE 3: Range of options selected by GDPs to enable management of DOAC patients in primary care.

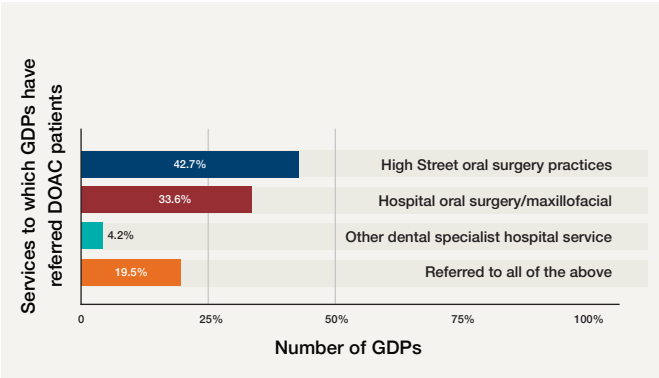

FIGURE 4: Services to which GDPs have referred DOAC patients.

return. The collection, analysis and dissemination of data took place between August and December 2018. To maintain data confidentiality, a central location was used for the distribution and return of questionnaires. The addresses and names of dental practitioners were placed on envelopes by HSCB staff to ensure no traceability of subjects by the research team. Informed consent was gained from GDPs for participation.

The Raosoft[11] sample size calculator was used to determine the sample size required, based on parameters such as desired confidence level, total population size, response distribution and the tolerated margin of error. The acceptable parameter of confidence level required was set at 95%, response distribution at 50% and a margin of error of 5%, which resulted in a minimum recommended sample size of 290.

Data analysis and dissemination

The data obtained was analysed using SPSS statistical software.[12] Frequencies were used to describe one variable and crosstabulation later employed to describe the relationship between multiple variables. A Cronbach's alpha test was used to test reliability of the data. Pearson's chi-squared test was used to analyse the degree of significant correlation between categorical data variables at ordinal and nominal level. A p value was obtained to determine if a statistically significant relationship was present between variables. Qualitative analysis was used for open answered questions with free-text responses and main themes outlined as they emerged.

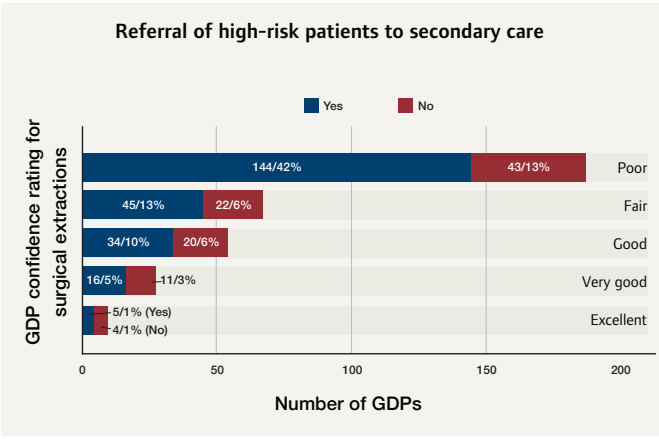

FIGURE 5: Comparison of GDP self-rating for complex extractions with number of referrals of DOAC patients to secondary care.

Table 2: Number of low-risk procedures carried out by GDPs per month.

Number	Matrix band application	Scaling
None	19	15
1-3	2	5
4-6	4	3
7-9	3	0
10+	316	321

Table 3: Number of high-risk procedures carried out by GDPs per month.

Number	Complex extractions	Adjacent extractions that will cause a large wound or more than three extractions at once	Surgical extractions
None	110	84	193
1-3	158	197	112
4-6	38	37	21
7-9	14	9	7
10+	24	17	11

Results

A total of 344 of the questionnaires returned were suitable for analysis, giving a response rate of 30%. Seven questionnaires were excluded as they were incorrectly completed. The response rate achieved resulted in a margin of error of 4.44% and a confidence level of approximately 97.3%. An alpha coefficient of 0.842 (Cronbach's alpha test) suggested good internal consistency.

Awareness of the SDCEP guidance

The majority (83.7%, n=288) of GDPs in the sample were aware of the SDCEP guidance. However, 24% (n=82) of those aware of the guidance were unaware that it had been endorsed by the DoH Northern Ireland. **Figure 1** shows the most common sources by which GDPs became aware of the guidance. Some 83.6% of GDPs (n=292) indicated that the SDCEP guidance increased their ability to treat patients taking DOACs in primary care, in comparison to 3.4% (n=10) who felt that they did not, and 13% (n=38) who were undecided.

Self-rated level of DOAC knowledge among GDPs

Respondents were asked to rate their own knowledge of DOACs on a five-point scale ranging from poor to excellent. Overall, 36.3% (n=125) rated their DOAC knowledge as poor to fair, while 63.7% (n=219) rated their knowledge as good to excellent. **Figure 2** shows the comparison between GDP DOAC knowledge rating and their confidence in managing DOAC patients in primary care. As DOAC knowledge increased, GDPs were less likely to refer more complex procedures to secondary care (p=0.001).

Management of DOAC patients in primary dental care

While 98% (n=337) of GDPs felt that DOAC patients could potentially be managed in primary care, only 18.3% (n= 63) felt that this was possible given the current level of skill, training and resources. Some 28.2% (n=97) felt that additional training was required, while 18.9% (n=65) felt that increased awareness of the SDCEP guidance was necessary. The majority (32.6%, n=112) felt that management in primary care would require a combination of both increased SDCEP guidance awareness and further training. Some 2% (n=7) felt that all patients taking DOACs should be referred to secondary care. **Figure 3** shows the suggestions made by GDPs to facilitate the management of DOAC patients in primary care.

Referral of patients taking DOACs to secondary care dental settings

A total of 80% (n=275) of the GDPs sampled reported referring DOAC patients to secondary care. Of these referrals, 88.4% (n=243) were classified as high-risk procedure referrals, 7.3% (n=20) as low-risk procedure referrals, and in the remainder of cases (4.4%, n=12), the GDP was unaware of whether or not the patient was taking DOACs. **Figure 4** shows the variety of services to which GDPs have referred DOAC patients.

Respondents were asked to provide their reasons for referring DOAC patients to secondary care. Some 45.3% (n= 129) expressed the view that secondary care settings are better placed to manage these patients, while 20.4% (n=58) cited inadequate experience. Some 13.3% (n=38) reported referring due to potential complications.

Comparison of low-risk and high-risk procedures

GDPs were asked to quantify how many low- and high-risk procedures, as classified by the SDCEP guidance, they carried out on a monthly basis. **Tables 2** and **3** show the number of low- and high risk-procedures, respectively, carried out by GDPs per month. GDPs with greater levels of experience with high-risk procedures were less likely to refer DOAC patients to secondary care (p=0.001), while those with lower self-reported confidence levels in undertaking surgical extractions were more likely to refer (p=0.014) (**Figure 5**).

Significance of gender

Of the 344 respondents, 149 were male and 195 were female. Female GDPs were more likely to be aware of the SDCEP guidance than their male counterparts (p=0.004). Some 81.5% (n=159) of female respondents felt that the guidance was easy to use, in comparison to 67.8% of males (n=101).

Additional comments

Four GDPs felt that patients should be made aware of the risks associated with dental procedures when taking DOAC medications, while seven mentioned that a secondary care contact in the event of concerns/complications could be a useful resource. Two GDPs made comments about the fear of legal implications being an influencing factor on the willingness of GDPs to manage these patients in general practice.

Discussion

The vast majority of GDPs (83.7%, n=288) in Northern Ireland are aware of the SDCEP guidance on the management of patients taking anticoagulant or antiplatelet drugs. The majority (98.0%, n=337) believe that patients taking DOACs could potentially be managed in primary care, subject to the provision of appropriate training and increased awareness of the SDCEP guidance.

While the results of the study have provided interesting data on GDPs' perceptions of the management of DOAC patients, and identified strategies to facilitate primary care management, a number of limitations exist. Given the

typically low response rates to postal questionnaires, a satisfactory response rate of 30% was achieved, although this still resulted in a relatively small sample size of 344 GDPs. Questionnaires may also have been returned on behalf of dental practices, rather than individual practitioners. Therefore, the findings may be representative of the views of more than 344 GDPs. The potential for response bias in those who opted to complete the questionnaire must also be considered. The self-reporting of data may also have been subject to recall bias, while the self-rating of DOAC confidence and knowledge levels are subjective measures. Seven questionnaires were incorrectly completed and therefore could not be included in the analysis. In addition, a 'multi-method approach' combining questionnaires with interviews is often advocated for this type of study and may have been a useful approach to adopt.[13] However, due to financial and time constraints, this approach was not taken in this instance.

The vast majority of reported referrals made to secondary care were for procedures classified as being at higher risk of postoperative bleeding complications in accordance with the SDCEP guidance (**Table 1**). The collected data revealed that the sampled GDPs carry out relatively small numbers of these procedures per month, suggesting that a combination of a lack of confidence and experience with high-risk procedures could be contributing to the high incidence of referral of DOAC patients for higher-risk procedures. This would correlate with the findings of some of the studies previously referenced,[9,10] which suggested that 69% of referrals to secondary care oral surgery services were based on anticipated surgical difficulty, while other contributory factors included complex medical histories, primary care practitioners who did not carry out surgical procedures, and a lack of oral surgery experience during undergraduate training among recent dental graduates.[8,10] This is also supported by the finding of this study, which showed a statistically significant relationship between increasing experience of GDPs in higher-risk procedures and decreasing number of referrals to secondary care ($p=0.037$).

Questionnaire responses revealed that 12% of the procedures referred to secondary care settings presented a low risk of postoperative bleeding complications and 4.4% of GDPs were unaware if a patient had been taking DOAC medication before referral. This highlights the potential for inappropriate referrals to secondary care settings. Inappropriate referrals represent a significant problem within the healthcare system, with significant financial implications. The purpose of the SDCEP guidance is to enable provision of care in the most appropriate setting. While the SDCEP guidance clearly outlines recommended protocols for the management of DOAC patients, it is clear that the publication of such guidance, as an isolated measure, is insufficient in ensuring that these recommendations are fulfilled.

A further consideration regarding the perceived reluctance of GDPs to manage DOAC patients in primary care is the lack of high-quality evidence on the bleeding risks associated with dental procedures in DOAC patients and on the continuation or interruption of DOAC doses for clinical procedures. The SDCEP guidance document states that the recommendations made are conditional and that decisions to interrupt anticoagulant medication are based on very low-quality evidence.[7] The recent introduction of DOACs and the resultant uncertainty regarding their effects is likely to have had an adverse impact on GDPs' perceptions of their own ability to manage these patients in primary care. The lack of availability of reversal agents to counteract the anticoagulant effects of DOACs is also likely to represent a major concern for dental practitioners.

The SDCEP guidance outlines clear protocols for the primary dental care management of DOAC patients. However, the guidance also stipulates that dentists must use their own judgement to determine whether they are sufficiently skilled to complete the procedure and manage consequent peri-operative bleeding. It is clear that GDPs need to be adequately supported to realise this goal. Merely being aware of the guidance does not support the implementation of the recommendations on a practical level, without corresponding training in their use and relevant clinical experience in their application.

The fear of litigation was also reported as a key factor influencing referrals. Cases resulting in litigation have been described in a study by Wahl *et al.*, which concluded that, to minimise the risk of such occurrences, dentists have an obligation to consult prescribing doctors and to educate patients on the bleeding risks associated with dental procedures.[14]

A number of GDPs also felt that a local pharmacy, HSCB, or secondary care advisory contact would support the management of these patients in primary care. This finding is supported by those of a previous study conducted by Lusk *et al.*, which concluded that periprocedural decisions regarding DOAC patients should involve a multidisciplinary approach.[15] The significant difference between female and male GDPs in terms of increased awareness of both the SDCEP guidance and its endorsement by the DoH Northern Ireland correlates with the findings of previous studies, which suggest that female practitioners are more likely to provide guideline-concordant care than their male colleagues.[16,17] In addition, it has also previously been reported that where males are more likely to have greater self-confidence and engage in more risk-taking behaviours, females are more likely to exercise caution when performing challenging procedures through carrying out research or consulting guidelines.[16,17]

A joint professional letter from the Chief Dental Officer and the Chief Pharmaceutical Officer was issued to all Health Service dentists in December 2017 endorsing the SDCEP guidance, in addition to information provided through the General Dental Services (GDS) News Sheet. However, almost a quarter of GDPs who reported being aware of the SDCEP guidance were unaware that this guidance had been endorsed by the DoH Northern Ireland. This would suggest that more effective collaborative approaches between the HSCB and GDPs would contribute to increased clarity among GDPs on locally approved management strategies. While the study focused exclusively on patients registered with the HSCB, it is likely that referral patterns share similarities with DOAC referrals in the private sector, as the same referral pathway is used by both the NHS and private dental practices.

A study published in 2017 found an increase of 58% in the number of first-time oral anticoagulant prescriptions during the period 2009 to 2015. It was found that new DOAC prescriptions increased dramatically during that period, with DOACs accounting for 56% of first-time oral anticoagulant prescriptions in 2015.[4] With the increasing prevalence of thromboembolic disease[3] and the emerging trend in the prescription of DOACs, GDPs are likely to witness an increase in DOAC patients presenting to primary care for routine dental procedures. Addressing the concerns of GDPs in relation to the management of these patients is essential to enable the provision of safe and appropriate care.

Conclusions

This study has shown that, while most GDPs in Northern Ireland are aware of the SDCEP guidance on the management of patients taking anticoagulant and

antiplatelet drugs, a large majority have referred DOAC patients to secondary care settings for treatment, in contradiction of the recommendations of the guidance. This has been attributed to a lack of confidence and experience in managing these patients successfully in primary dental care.

The findings of this study should be used to address the concerns of GDPs within Northern Ireland relating to the management of patients taking DOACs in primary dental care. The issues raised may well be universal to other regions. Enhanced adherence to the SDCEP guidance should enable the provision of efficient and timely care in the most appropriate setting for these patients, as well as avoiding the overburdening of limited and costly secondary care resources.

Acknowledgements

The authors would like to acknowledge the contribution of the dental and pharmacy staff at the HSCB, Northern Ireland. The authors would also like to acknowledge Marlene Drummond (HSCB Ballymena Office) and other HSCB staff for their help with questionnaire distribution, and Dr Mamoon Aldeyab (MPharm lecturer, Ulster University) for his help and support with statistical analysis.

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CPD questions

To claim CPD points, go to the MEMBERS' SECTION of www.dentist.ie and answer the following questions:

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CPD

1. What percentage of referrals to secondary care settings involved procedures with a low risk of postoperative bleeding complications?

- ○ A: 41%
- ○ B: 12%
- ○ C: 24%

2. What percentage of GDPs rated their knowledge of DOAC medication as poor-fair?

- ○ A: 63.7%
- ○ B: 36.3%
- ○ C: 73.6%

3. What percentage of GDPs believed DOAC patients could be managed in primary dental care settings, if additional training was provided?

- ○ A: 98%
- ○ B: 11%
- ○ C: 89%

Persistent post-surgical orofacial pain

Abstract

Delivery of pain-free dental treatment is the ultimate goal for clinicians, and the hoped-for result by patients. Thanks to the optimised use of local anaesthesia and high standards of clinical training, this goal is frequently achieved. Research also tells us that the incidence of persistent pain following dental procedures, while relatively low, is not zero. Given the number of procedures we perform as dentists, the number of patients affected with post-treatment pain is still substantial. Moreover, persistent pain is not exclusive to dentistry, but is a risk for all surgical interventions.

When this pain lasts over six months it has been labelled persistent or chronic post-surgical pain (CPSP), and as expected it has a detrimental effect on the patient's quality of life. While all persistent pain is vexing, it is especially true for persistent orofacial pain. It creates increased levels of stress, anxiety and confusion for the patient, which in turn may place a strain on the dentist-patient relationship. On occasions, patient dissatisfaction may even result in medicolegal litigation.

This article describes some of the common clinical scenarios associated with chronic pain after dental procedures. Known risk factors are also discussed and recommendations are made so that clinicians might identify those at risk prior to an invasive procedure, and then possibly prevent post-surgical pain.

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Introduction

Pain signalling from the orofacial area is mediated through the trigeminal nervous system. This system bears much in common with pain signalling through spinal nerves but there are some important differences. The oral cavity is a highly sensitive organ in the body, and somatosensory information from the facial area occupies almost 50% of the somatosensory cortex. Many of the common pain disorders in the orofacial area (e.g., trigeminal neuralgia, burning mouth, headache, temporomandibular disorders, etc.) are unique to the trigeminal system. The classification of orofacial pain has traditionally been based on symptom description, but we now appreciate that if we understand the underlying mechanism of the pain, we can potentially manage it better.[1] Several clinical disorders may co-exist simultaneously or at different times in the orofacial region. Dental procedures may cause direct trigeminal nerve injury, but more commonly dental procedures provide a significant disturbance of sensory input into the trigeminal system, resulting in central neuronal sensitisation and persistent neuropathic pain disorders.

If a dentist could identify a patient with high risk for persistent post-surgical orofacial pain, it might be possible to reduce the odds of this happening. For example, Fillingim examined a cohort of 321 volunteers and found a hugely variable response to a standardised pain stimulus.[2] They concluded that this variability supported the theory that some patients are more susceptible to pain disorders, and speculated that an important risk factor for persistent post-treatment pain is the individual's susceptibility to pain stimulation (**Figure 1**). They suggested that this susceptibility may be genetic but it may also be associated with a myriad of other risk factors.[3] One clue to an increased susceptibility would be patients who exhibit other persistent pain disorders (e.g., unexplained back pain, gastrointestinal discomfort, headache, etc.). Such patients are more likely to have disorders of pain signalling or modulation, and thus are at increased risk of abnormal trigeminal responses.

Dermot Canavan
Dublin Dental University Hospital

Philip Hardy
Dublin Dental University Hospital

Michael O'Sullivan
Dublin Dental University Hospital

Glenn Clark
Herman Ostrow School of Dentistry
University of Southern California

Corresponding author: Dermot Canavan, Dublin Dental University Hospital.
drdcanavan@gmail.com

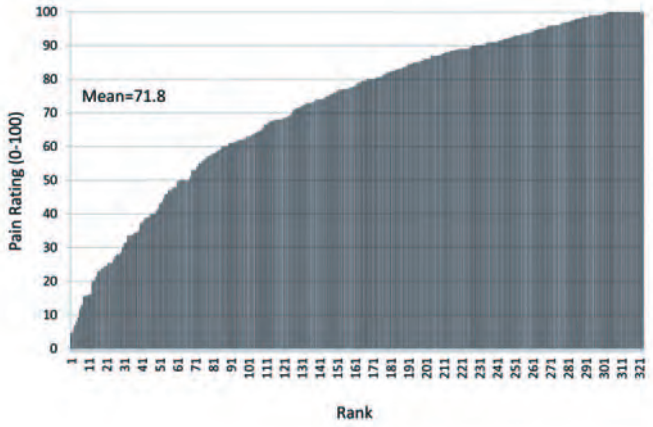

FIGURE 1: Pain ratings in response to a heat stimulus (48°C) by 321 healthy young adults. Each line represents the pain rating (from 0 [no pain] to 100 [most intense pain imaginable]) by a single person. As can be seen, the mean pain rating was 71.8, but ratings ranged from 4 to 100. These data illustrate dramatic interindividual differences in responses to a standardised experimental pain stimulus. (Reproduced with permission from publishers.)

Table 1: Incidence of CPSP, severe CPSP, and proportion of neuropathic pain in CPSP. Adapted from Schug, S., Bruce J (2017).[3]

Type of surgery	Incidence of CPSP	Incidence of severe CPSP (>5/10)	Proportion of neuropathic pain in CPSP
Amputation	30-85%	5-10%	80%
Cholecystectomy	3-50%	Not reported	Not reported
Coronary bypass	30-50%	5-10%	Not reported
Dental surgery	5-13%	Not reported	Not reported
Dental implants[22]	0.8%	Not reported	0.3%
Hip arthroplasty	27%	6%	Not reported
Inguinal herniotomy	5-63%	2-4%	80%
Knee arthroplasty	13-44%	15%	6%
Mastectomy	11-57%	5-10%	65%
Thoracotomy	5-65%	10%	45%

Common clinical scenarios associated with persistent pain after dental procedures

Neuropathic pains

The incidence of direct trigeminal nerve injuries resulting from surgical dental procedures is small, but given the number of dental procedures routinely carried out, the number of affected patients is still substantial.[4,5] The majority of these injuries are reported as altered sensation and resolve spontaneously over time. Unfortunately, a small minority (about 3%) are associated with severe (sometimes disabling) pain. In the dental literature persistent pain associated with nerve injury has been described as painful post-traumatic trigeminal neuropathy (PTTN). In analogous medical literature, this phenomenon is described as chronic post-surgical pain (CPSP). Research on CPSP is extensive and suggests that it is hugely under-reported.[3] This condition has extensive effects on patients' quality of life and healthcare costs are also significant. **Table 1** illustrates the extent to which persistent post-surgical pain presents following certain types of surgery. The variability in numbers is explained by differences in reported methodology, variations in definitions, study design and time frame used as a cut-off for inclusion. In **Table 1**, the third column indicates the percentage of chronic severe pains that are neuropathic in origin. Most definitions for CPSP indicate that pain must be present for at least three months after surgery. It excludes patients where the pain is associated with a previously existing disease process.

In dentistry, when persistent pain occurs after an otherwise successful dental procedure the mechanism is often assumed to be neuropathic. It is important to note that this is not always the case, as some patients may experience pain for other reasons. While the number of citations in the dental literature is sparse, there are multiple reviews describing persistent post-endodontic, post-surgical and post-implant pain. Such data is important in terms of documenting the extent of the problem and was highlighted by the International Association for the Study of Pain, which dedicated the year 2017 as the Global Year Against Pain After Surgery.

PTTN has been associated with facial injuries and dental procedures such as root canal therapy, extractions, bone cyst surgery, orthognathic surgery, and dental implant placement.[6] In addition, local anaesthetic injections have been implicated as a cause of both non-painful (altered sensation only) and painful neuropathies.[4] This occurs when a local anaesthetic procedure injures the nerve due to physical injury from the needle or chemical toxicity from the injected substance. Pain may be spontaneous or triggered, and generally resides in the dermatome of the involved peripheral nerve. Sensory symptoms arising from neuropathic pain disorders may be associated with partial or complete loss of sensation. Patients frequently use descriptors such as burning, stinging, aching or throbbing pain. Detailed clinical examination of the symptomatic area will typically show signs of sensory abnormalities (allodynia, hyperalgesia) in the soft tissues of the affected dermatome. In some patients these sensory abnormalities may be subtle and difficult to identify, and therefore underappreciated.

Pain after root canal treatment

A study by Philpott *et al.* initially reviewed 264 teeth that had non-surgical root canal treatment over a period of five to 14 months.[7] They found that 24% of those teeth presented with persistent post-treatment pain or discomfort. Periapical healing was further monitored at intervals of six months, four years, and ten years later. Interestingly, long-term follow-up showed that the majority of those patients experienced a reduction in symptom intensity over time. These authors also concluded that another risk factor for persistent pain was a previous history of chronic pain (temporomandibular disorder [TMD], chronic neck or back pain, chronic preoperative pain, etc.). Local dental factors including the presence of periapical radiolucency and/or tooth fracture were associated with those treated teeth that ultimately failed to resolve. Other endodontic studies have identified additional risk factors for persistent post-treatment pain, including the intensity and duration of preoperative pain at the treatment site, previous chronic pain experiences and female gender.[8]

Pain after implant placement

Certainly, the risk of direct nerve injury associated with dental implant placement has been well documented. Most injuries are merely altered

sensation but some result in intense, debilitating pain. Typically, the affected area is exquisitely sensitive and pain is aggravated by simple actions like speaking, eating, smiling, and kissing.[6] Neuropathic pains do not respond fully to conventional analgesics but specific neuropathic pain protocols are available, involving drugs that reduce nerve transmission. Unfortunately for those with the most severe pains, the success rate is disappointing as nerve conduction cannot be stopped without inducing substantial side effects. Studies have shown that other potential risk factors for chronic pain after dental implant placement include the presence of prolonged preoperative pain at the site of placement, the experience of intense pain during implant placement and severe discomfort in the immediate postoperative period. Removal of the offending implant is an option but not always helpful. One research report suggested that if the implant is not removed within the first 48 to 72 hours, removal is unlikely to help.[9] The belief is that central changes in pain pathways occur quickly with nerve injuries. In some cases, removal of the implant may actually cause further inflammation and nerve sensitisation.

Although it is assumed that neuropathic disturbances following dental implant placement are due to direct mechanical injury of a peripheral nerve, this is not always the case. Other possible explanations include thermal or chemical injury during the procedure. Anatomical anomalies with accessory or supplemental innervation may also be a factor. The reality is that adverse events can occur with dental implant placement, even with careful planning and the use of skilled clinicians. Problems may arise in the absence of obvious organic pathology and neuropathic pain may exist in the absence of neurosensory deficits. Studies would seem to suggest that nerve injury/disturbance is more likely to occur in the mandible, but reports of problems in the maxilla after dental implant placement have also been documented.[10] Chronic periapical infections around natural teeth have also been documented as a potential source of trigeminal neuropathic pain.[11] In that paper half of the trigeminal nerve injuries were associated with first molar teeth.

Pre-existing pain issues

Although patients may understandably relate their pain experience to a recently performed dental procedure, there are many situations in which the problem was pre existing. For example, dental pain can be due to the activation or aggravation of trigeminal neuralgia (TN). Trigeminal neuralgia is a neurological disorder of uncertain aetiology.[12,13] It is characterised by intermittent sharp shooting pains of severe intensity but brief duration in the mandible or maxilla (or both). It is almost always unilateral and rarely affects the ophthalmic division of the trigeminal nerve. It is often misdiagnosed as pulpal pain. The average age of onset is 55 years and the distribution between males and females is roughly equal. It is not unusual for patients to remain convinced that a dental procedure precipitated the problem, particularly if the procedure was in close temporal relationship to the onset of symptoms. However, given our knowledge of the putative mechanisms, it seems likely that the stimulation from the procedure merely aggravated the underlying problem. There is evidence that vascular compression of the trigeminal nerve root may be the cause of TN but this is not always the case. The classification of orofacial pain by the International Headache Society includes vascular compression in the criteria for 'classical' TN.[1] Similar symptoms can arise secondary to underlying neurological disease such as multiple sclerosis or intracranial tumour. However, in the majority of cases there is no identifiable underlying disease. TN is thought to be an episodic disorder for most patients, often with lengthy intervals of remission from the pain. There is a risk that dental treatment carried out during these pain-free periods could reactivate the patient's pain problem.

Table 2: Clinical characteristics of orofacial migraine as per the International Classification of Orofacial Pain.[1]

Location	Confined to orofacial area
Duration	4-72 hours
Laterality	Typically unilateral but not always so
Quality	Throbbing, pulsating pain
Intensity	Moderate to severe
Aggravating factors	Routine physical activity
Associated symptoms	Nausea, vomiting, photophobia, phonophobia

In addition to TN, several other types of trigeminal neuropathic pains exist. Previously used terminology included atypical odontalgia and idiopathic facial pain. These are continuous pain disorders mostly experienced in the mandible and maxilla. They are often difficult to diagnose and may have characteristics suggestive of odontogenic pain. The aetiology of these disorders is uncertain and, unfortunately, these disorders are often aggravated by routine dental procedures.[14] If the pain persists, it is not uncommon for the patient to suspect a failed dental procedure as the causation.

Headache presenting as facial pain

Orofacial pain complaints that arise following dental procedures may be headache related. Primary headache disorders including migraine, cluster headache, tension-type headache, and headache syndromes with autonomic features are known to affect the face and orofacial regions.[15] This is not surprising as the pathophysiology of headache pain is mediated by branches of the trigeminal nerve. Headache mechanisms are complex but one important feature from a dental perspective is the elevated and prolonged hyperexcitability to stimuli within the trigeminal system. The very nature of dental procedures generates a significant degree of activation of nociceptive and non-nociceptive neurons in the oral cavity. This response may be modified to a certain degree by the use of local anaesthesia.

Many patients will describe their pain as facial or dental in location, which arose only after dental treatment.[16] It should be noted that for the majority of migraineurs the pain location may vary between attacks. Poor localisation of migraine pain increases the diagnostic challenge. It is recognised that migraine pain may be experienced in the midface, eyes, ears, head, and neck. A carefully taken history will in many cases highlight the fact that the patient had a pre-existing headache disorder. For some patients the headache problem may have been inactive for some time prior to the dental treatment. Apart from unexplained orofacial pain, migraine may also be responsible for unexplained ear pain.[17]

The diagnosis of orofacial migraine is based on identification of the clinical characteristics, as per **Table 2**.

Patients with trigeminal nerve injury as a result of external trauma or dental procedures will sometimes note that their existing headache pain changes in location. This has been described as 'pain remapping'. It implies that the migraine pain shifts to the region where the trigeminal nerve injury has

Table 3: Risk factors for chronic trigeminal neuropathic pain.

Chronic pain disorders	Medical conditions	Factors associated with previous dental treatment	Individual characteristics
Chronic headaches	Diabetes	Chronic preoperative pain	Gender
Chronic neck or back pain	Autoimmune disorders	Acute postoperative pain	Anxiety
Irritable bowel syndrome		Chronic pain following previous dental procedures	Depression
Fibromyalgia			Tendency to catastrophise

occurred. Failure to recognise the headache disorder in the symptomatic area may lead to unnecessary and unhelpful treatments.[4]

Temporomandibular disorders

The term TMD refers to a diverse group of painful and non-painful conditions affecting the jaw joints and masticatory muscles. These disorders are characterised by an array of symptoms, which may include pain with function (chewing, yawning, talking, etc.), joint noises, and limitation of movement or locking. The aetiology is known to be complex and multifactorial.[18] The onset of orofacial pain after dental treatment may be associated with aggravation of a pre-existing condition or the sudden onset of a TMD. Potential aetiological factors for TMDs include gender, genetics, systemic illness, stress, depression, bruxism, and trauma.

Most studies examining the relationship between trauma and TMD are retrospective. The limitations of such studies include recall bias. Obvious jaw or facial injury is usually recorded but many of these studies overlook more subtle forms of injury such as prolonged mouth opening. A recent prospective study assessed the relationship between injury, temporomandibular joint (TMJ) disorders and pain sensitivity.[19] A total of 409 adults who did not have a TMD were followed over a five-year period. Sensitivity to pinprick and thermal stimuli was recorded as a measure of susceptibility to pain. Over the five-year period, 233 cases of TMD incidents were noted. Of these cases, 8.1% documented injury at the onset of their symptoms. Within this trauma group the majority described either yawning (22.3%) or sustained mouth opening (24.5%) as the initiating event. The risk of jaw injury was amplified in those patients who had high levels of pain sensitivity at the start of the study.

Thus, it is not surprising that patients will sometimes complain of muscle or joint pain after dental procedures.[20] Prolonged mouth opening is a vulnerable jaw posture in a masticatory system that is essentially designed for maximum chewing efficiency and strong biting forces. The diagnosis of a painful TMD is based on careful review of the patient's history and findings from the clinical examination.

Can we assess the level of risk for our patients and, if so, can we prevent pain?

Currently there is no simple blood or saliva test that will help us to determine the extent to which our patients are liable to develop persistent pain following oral surgery and dental treatment. However, our knowledge of the risk factors associated with medical and dental interventions is growing rapidly.[3] It is also clear that some individuals carry a high level of vulnerability to persistent pain for a variety of reasons (including genetic susceptibility). At present, our ability to identify those most at risk is largely dependent on taking a detailed personal, dental, medical and family history.

Identification of comorbid conditions such as migraine, back pain and irritable bowel syndrome may signal an enhanced susceptibility to persistent pain.[21] Systemic illnesses, including diabetes, disorders of the immune system and fibromyalgia, are associated with increased risk of neuropathic pain and other chronic pain states.

The phrase 'pain predicts pain' has been used to highlight the fact that chronic preoperative pain and acute postoperative pain are strong predictors of chronic pain after surgery. A previous history of persistent pain after dental procedures or surgery should therefore be considered a red flag for future pain problems.[8] Many studies identify female gender as a risk factor. A history of chronic anxiety, depression, and/or chronic sleep disturbance is considered a significant risk factor for persistent pain. Poor coping skills and a tendency to catastrophise are strongly associated with high levels of functional impairment after injury.[3] Early life experiences, including adverse life experiences in childhood and adolescence, have been shown to increase susceptibility to persistent pain.

Finally, our growing knowledge of pain mechanisms and chronic pain states has brought substantial improvement in the diagnosis and management of these challenging disorders. However, in the absence of specific clinical testing for pain vulnerability, we are still dependent on taking a detailed and careful history as part of our preoperative assessment.

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CPD questions

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CPD

1. In relation to risk factors that might signal a patient's susceptibility to persistent pain, which of the following statements is true?

- ○ A: Comorbid conditions such as migraine, back pain, and irritable bowel syndrome may signal an enhanced susceptibility to persistent pain
- ○ B:The patient's gender is irrelevant
- ○ C: The intensity and duration of pre-existing pain has no influence on the outcome of the procedure

2 In a recent prospective study on the development of TMDs in patients over a five-year period, what percentage of patients attributed the onset of TMD symptoms to trauma?

- ○ A: 50%
- ○ B: 25.6%
- ○ C: 8.1%

3. Which of the following is not a feature of orofacial migraine?

- ○ A: Pulsating pain in the orofacial region
- ○ B: An area of permanent numbness in the face
- ○ C: Pain aggravated by routine physical activity

Measures to reduce the clinical need for dental amalgam: an evidence review

Keane, M., Lee, C., Long, J.

International binding agreements oblige signatories, including Ireland, to reduce their use of mercury to protect the environment. In response, the Irish Government needs to phase out the use of dental amalgam by 2030. The aim of this evidence review was to examine factors relevant to phasing out of amalgam and consider alternative replacement strategies for treating dental caries.

We examined evidence where: a) exemptions existed to allow the use of dental amalgam; and, b) measures taken to phase out amalgam. We also drew on 101 systematic reviews to identify alternative interventions to amalgam and their effectiveness.

We found that exemptions to permit the continued use of amalgam only applied when treating permanent tooth restoration. Measures to phase out dental amalgam ranged from raising public awareness of the risk to the environment, to realigning dental insurance policies to prioritise alternatives to amalgam.

There is adequate evidence that: a) fluoride technologies and resin-based sealants are effective in preventing dental caries; and, b) silver diamine fluoride, sealants combined with fluoride, and microinvasive strategies are effective in early treatment of caries. Glass-ionomer cements are equal to other restorative materials for restorations in primary teeth. Composite resin formulations are considered the next best restoration alternative to amalgam.

Health Research Board, 2020. Available from: https://www.hrb.ie/fileadmin/2._Plugin_related_files/Publications/2020_publication-related_files/2020_HIE/Measures_to_reduce_the_clinical_need_for_dental_amalgam.pdf.

A review of Covid-19 vaccination and the reported cardiac manifestations

Ho, J.S., Sia, C.H., Ngiam, J.N., Loh, P.H., Chew, N.W., Kong, W.K., *et al.*

Abstract

In Singapore, 9.03 million doses of the mRNA Covid-19 vaccines by Pfizer-BioNTech and Moderna have been administered, and 4.46 million people are fully vaccinated. An additional 87,000 people have been vaccinated with vaccines on the World Health Organization's emergency use listing. The aim of this review is to explore the reported cardiac adverse events associated with different types of Covid-19 vaccines. Some 42 studies that reported cardiac side effects after Covid-19 vaccination were included in this study. Reported Covid-19 vaccine-associated cardiac adverse events were mainly myocarditis and pericarditis, most commonly seen in adolescent and young adult male individuals after mRNA vaccination. Reports of other events such as acute myocardial infarction, arrhythmia and stress cardiomyopathy were rare. Outcomes of post-vaccine myocarditis and pericarditis were good. Given the good vaccine efficacy and the high number of cases of infection, hospitalisation and death that could potentially be prevented, Covid-19 vaccine remains of overall benefit, based on the current available data.

Singapore Medical Journal 2021. DOI: 10.11622/smedj.2021210. Epub ahead of print. PMID: 34808708.

Visualizing in deceased Covid-19 patients how SARS-CoV-2 attacks the respiratory and olfactory mucosae but spares the olfactory bulb

Khan, M., Yoo, S.J., Clijsters, M., Backaert, W., Vanstapel, A., Speleman, K., *et al.*

Abstract

Anosmia, the loss of smell, is a common and often the sole symptom of Covid-19. The onset of the sequence of pathobiological events leading to olfactory dysfunction remains obscure. Here, we have developed a post-mortem bedside surgical procedure to harvest endoscopically samples of respiratory and olfactory mucosae and whole olfactory bulbs. Our cohort of 85 cases included Covid-19 patients who died a few days after infection with SARS-CoV-2, enabling us to catch the virus while it was still replicating. We found that sustentacular cells are the major target cell type in the olfactory mucosa. We

failed to find evidence for infection of olfactory sensory neurons, and the parenchyma of the olfactory bulb is spared as well. Thus, SARS-CoV-2 does not appear to be a neurotropic virus. We postulate that transient insufficient support from sustentacular cells triggers transient olfactory dysfunction in Covid-19. Olfactory sensory neurons would become affected without getting infected.

Cell 2021; 184 (24): 5932-5949.

Effectiveness of The Wikipedia Collaboration of Dental Schools' training programme: a new paradigm for teaching and learning of evidence-based dentistry

Tan, L., Lai, S.M., Geres, N., Innes, N.P.T., Radford, J.R., Revie, G., *et al.*

Background: The Wikipedia Collaboration of Dental Schools (WCODS) is a student-led initiative that aims to publish high-quality scientific, evidence-based dental content on the Wikipedia online encyclopaedia by equipping its members to use research, critical appraisal and writing skills to create accurate content. In 2019, the Collaboration launched a standardised training programme developed by Wikimedia-trained committee members, academic dental school staff and the Cochrane Oral Health global community.

Objective: To evaluate the effectiveness of this training programme in ensuring WCODS editors follow the processes underpinning evidence-based dentistry (EBD).

Method: A cohort of dental students and staff (n=136) from six dental schools in the UK and Malaysia took part in a standardised and structured training programme at the annual WCODS training meeting. Participants' abilities and their perceived levels of confidence in carrying out critical analysis of the literature were measured using pre- and post-training surveys, and competency assessments.

Results: Participants' skills in conducting literature searches, critical appraisal of the findings, and creating and editing a Wikipedia page improved after training.

Conclusion: The training programme provided participants with the skill set and confidence to apply best practice to create and edit Wikipedia entries. This Collaboration intends to recruit more contributors to improve global oral health literacy using the free online Wikipedia encyclopaedia.

Community Dental Health 2021; 38: 1-5.

Quiz answers

Questions on page 298

1. This process is external cervical resorption (ECR), which usually occurs in the cervical aspect of a tooth as a result of damage to and/or deficiency of the periodontal ligament (PDL) and subepithelial cementum. It is a dynamic process with destructive (resorptive) and reparative phases. In this case the resorption has caused the tooth to undergo necrosis and apical periodontitis has developed.

2. The aetiology of ECR is unclear and poorly understood. Potential predisposing factors include but are not limited to: orthodontics; trauma; parafunction; malocclusion; extraction of neighbouring tooth; viral infections; eruption disorders; and, non-vital bleaching.

3. Patients are usually asymptomatic, and the lesions are usually advanced before the eventual invasion of the pulpal space causes symptoms of pulpitis or apical periodontitis. A pink spot may be visible but is rare, or a hard defect with associated perfuse bleeding can sometimes be felt clinically by probing. There is no classic radiographic appearance of ECR but these lesions are usually found incidentally on radiographic examination. Lesions can be either radiolucent or more radiodense depending on whether the ECR is in a resorptive or reparative phase. The root canal walls should be intact and traceable, which distinguishes this lesion from internal inflammatory resorption.

4. A CBCT is essential to be able to appropriately diagnose, classify and manage ECR. Treatment options include:
   - external repair, which may or may not include root canal treatment depending on the vitality of the pulp;
   - internal repair and root canal treatment;
   - intentional replantation;
   - if unrestorable/untreatable, then periodic review may be appropriate; and,
   - extraction if appropriate.

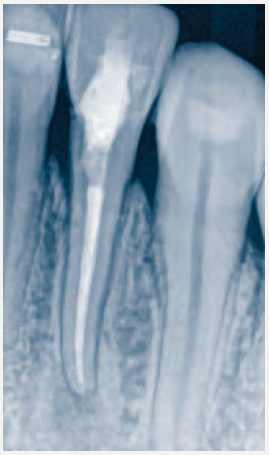

FIGURE 3: Post-op peri-apical X-ray.

In this case the tooth had become necrotic, so the option of internal repair and root canal treatment was chosen (**Figure 3**).

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We have high earning opportunities within our practices. Join one of our modern computerised practices, which have strong established books. Supported by our skilled, friendly support teams. Flexible options available. Contact careers@dentalcareireland.ie.

Do you want to develop your skills and work in a friendly, modern, fully digital, private/PRSI practice? We have a prosthodontist, general dentist, hygienists and full support team on site. We offer great remuneration with flexible working hours. Contact info@naasdental.ie.

MyDental Cherrywood requires a full-time general dentist to join our growing team. Associate contract available. Great earning potential. Busy south Dublin practice in growing area. Send CV to careers@mydental.ie.

Dentist needed for beautiful clinic in Limerick City. Recently renovated and modern. Excellent support staff. Digital X-rays and CBCT, CEREC Omnicam. Part-time (Monday and Tuesday) and full-time positions available. Contact dr.odonovan@alexandradental.ie.

Frazer Dental, Implants & Orthodontics (one hour north of Dublin, 40 minutes from Newry) requires two dentists for Saturdays. Cosmetic dentist for Invisalign and bonding, and general dentist for one to four Saturdays per month. Flexible hours and dates. Great Team! Contact frazermanagement1@gmail.com.

Experienced dentist required to join our team in Sligo Town. Full-time position in private clinic. Multidisciplinary team with in-house specialists. Excellent backroom support. In-house laboratory, fully digital, newly equipped. Exceptional opportunity. Please send CV to sligodental1@gmail.com.

Tired of being an associate? Unique opportunity for expense-sharing partnership in independent, modern practice in Carlow. Choose your own hours to dictate your level of income. Computerised, digital X-rays, qualified and professional support staff. Contact carlowdentaljob@gmail.com.

Dentist required one to two days to join our modern, private, multidisciplinary practice. Some Saturday mornings. Contact customer@smilesandmore.ie with CV.

Full-time dentist for private practice in Bray. SOE, OPG, excellent support. 50% split/expense-sharing partnership possible for suitable candidate. CV and application please to drjohnmurphy@gmail.com.

Smiles Dental is looking for passionate dentists to join our private, well-established, state-of-the-art practices across Ireland in Enniscorthy, Balbriggan, Athlone, Drogheda, Dundalk, Dun Laoghaire, O'Connell Street, Swords, Tallaght and Wexford. Positions offer up to five days per week, established lists, great earning potential. Contact sophie.collier@bupadentalcare.co.uk.

Full-time dentist for busy family practice in Dundrum. SOE, OPG, excellent support. 50% spli /expense sharing partnership possible for suitable candidate. CV and application please to newdublindentist@gmail.com.

Experienced general dentist (two to four years) required, multidisciplinary clinic Dublin. Supported by team of experienced specialists, orthodontist, prosthodontist, periodontist and endodontist. Fully digitised workflow, CBCT, 3D milling machine, microscope, in-house social media team, mentoring support. Contact jobvacs@hotmail.com.

Fully private dental practice in north Dublin requires a cosmetic dentist for Invisalign and bonding, and a general dentist to join our growing dental team. Flexible hours and dates. Great support staff. Contact northdublindentalassociate@gmail.com.

Locums

Independent, established, fully computerised practice, digital X-rays/OPG and good remuneration. Three years+ experience for locum dentist with a view to part/full-time position, in a relaxed, bright and spacious environment. Friendly atmosphere, excellent staff and two hygienists. Flexibility available. Contact castlemilldental@gmail.com.

Raheny Orthodontics requires a locum orthodontist from March 2022 for four months for two days per week. Contact info@rahenyortho.ie.

Specialists/limited practice

Specialist orthodontist required to join busy general dental practice in Ballincollig, Cork. Established specialist orthodontist present one day per week. Looking to add further orthodontic sessions. For enquiries, please email marian@corkdentalclinic.com.

Endodontist required to join our top multidisciplinary, specialist, award-winning dental team in Newbridge and/or Waterford. Fully digitalised practices with microscope. High earnings guaranteed. Supportive administration team. Specialist-led environment. Please contact in confidence. Email bpm.gmedical@gmail.com.

Fully qualified prosthodontist is required to join a well-established specialist referral private practice in Galway City. Commencing in November 2021, to replace a departing colleague. CV and information requested to Linda Allen at suiteg9@gmail.com.

Partnership opportunities for orthodontists, endodontists, periodontists and general dentists in our new clinic in Blackrock, Dublin. Join our award winning seven-day multidisciplinary practice. Contact jobs@shieldsdentalclinic.ie.

Specialist orthodontist required to join our existing book. Up to 60% associate rate paid for a suitable candidate. Digital practice with an excellent support team. Contact info@deansgrangedental.ie.

Beautiful, state-of-the-art, multidisciplinary clinic in Dublin seeks an enthusiastic periodontist to join our team, replacing a departing colleague who has built up a full-time practice of periodontology and implant dentistry. Contact hrmanager@ncdental.ie.

Specialist orthodontist required to join a busy private general dental practice one day per week in north Dublin with five full-time general dentists and a full-time hygienist. Digital radiographs, OPG machine and digital scanner present. Excellent support team. Contact northdublindentalassociate@gmail.com.

Specialist orthodontist position available in busy Cork City practice. State-of-the-art facilities with iTero. Orthodontic therapists and support team. Salaried or chair percentage. Flexible days and hours to suit you. CVs to alex@whitesmiledental.ie.

Orthodontist needed for beautiful clinic in Dublin city centre. Recently renovated and modern. Full Invisalign training provided if necessary. Excellent support staff. Contact louise@clearbraces.ie.

MyDental Cherrywood requires a full time dental implantologist to join our growing team. Associate contract available. Great earning potential. Busy south Dublin practice in growing area. Send CV to careers@mydental.ie.

Orthodontist required for a busy specialist/general dental practice in west Limerick, with a long consult waiting list, a good relocation package available if necessary. Enquiries to info@mullanedental.ie.

Orthodontist required for great clinics in the west of Ireland. Recently renovated and modern. Excellent support staff. Digital X-ray and CBCT, lat ceph, scanners. Relocation package offered. Please forward CVs to dr.odonovan@alexandradental.ie.

Specialist oral surgeon required to join our multidisciplinary team, in a beautiful, state-of-the-art Dublin clinic with CBCT. This position is replacing a departing colleague who has built up a three-day practice of oral surgery. Contact hrmanager@ncdental.ie.

Unique opportunity for partnerships in a beautiful, state-of-the-art, multidisciplinary clinic in Dublin, for an oral surgeon and a periodontist. Fully digitised workflow, CBCT, in-house social media team and full administration support. Contact hrmanager@ncdental.ie.

Dental nurses/receptionists/managers

Full-time, experienced dental nurse required for busy practice in Dublin 18. Exact Software experience preferable but not essential. Good remuneration for the right candidate. Contact admin@cdpractice.com.

Part-time receptionist required for busy practice in Ongar Village, D15. Flexible hours, generous remuneration, friendly staff. Please send CV to ongar.dental@gmail.com or call 01-640 2733 for further information.

Full-time, experienced dental nurse required for busy practice in Cork City. Exact Software experience preferable but not essential. Please send CV to info@cantydental.ie.

State-of-the-art specialist dental practice, north Dublin, seeks dental receptionist manager. Our busy practice seeks an experienced manager, committed to providing exceptional patient care, outstanding customer service, dental office management and treatment co-ordination. Contact hrmanager@ncdental.ie.

Swords Dental is seeking a full-time receptionist for our modern, friendly practice. Good IT skills needed. Please send CV to colinpatricklynam@hotmail.com.

Full-time dental nurse required for our busy clinics in Dublin 8 and Dublin 12. Looking for an enthusiastic dental nurse to join our friendly team. Please email CV to info@cleardentalcare.ie.

Part-time dental nurse required for busy practice in New Ross, Co. Wexford. One to two days per week including some Saturdays. Great opportunity in progressive, friendly practice. Experience preferable. IT skills necessary. CV to info@rogersdental.ie.

Receptionist and dental nurse required for our expanding, modern, fully computerised, busy dental practice in Galway City. Full-time positions available. Please forward your CV to office@renmoredental.ie.

Wanted: dental nurse to work part time in a busy, modern, fully computerised orthodontic practice in Oranmore, Co. Galway. Orthodontic experience desirable but not essential. Please send CV to reception@annehahessy.ie.

Exciting and rare opportunity for a full-time dental nurse to join our multidisciplinary practice. Fully computerised. Experienced, friendly, dynamic team. Previous dental nursing experience essential. Excellent rate of pay. Contact Pauline@clondalkindental.ie.

Hygienists

Part-time hygienist required for busy dental practice. Fully computerised, excellent support. Please email CV to Pauline@clondalkindental.ie.

Full/part-time hygienist positions available at our newly renovated, modern dental practice in Galway City. Please email CV to office@renmoredental.ie.

Blessington, Co. Wicklow. Part-time hygienist required. Busy computerised surgery. Immediate start. Join a dedicated team. Email CV to niall@blessingtondental.ie.

Hygienist wanted to join busy dental practice in Cavan Town, two/three days per week. Apply by CV to churchstdental@gmail.com.

Great opportunity for experienced hygienist to join our friendly team at the long-established Rathfarnham Dental Practice. Replacing retiring colleague. 30+ hours per week, negotiable. High remuneration for suitable candidate. Please apply with resume to RDPhygienist@gmail.com.

Hygienist required for busy, friendly east Cork practice. Within 40 minutes easy commute of Cork City. Two days per week with very supportive team. Please apply with CV to Youghaldentist@gmail.com.

Part-time hygienist position available in our modern, fully computerised practice. Email CV to clarinbridgedental@gmail.com.

Busy orthodontic specialist practice requires dental hygienist one to two days per week. Days are flexible. The ideal candidate will have a warm and welcoming personality, with commitment to provide excellent customer service to each patient. Health and safety protocols in place. Contact jackie@orthodonticsbyjackie.ie.

Dental practice Headford, Co Galway, seeking qualified dental hygienist to join a dynamic team two days a week – Mondays and Wednesdays. Established books, fully computerised. Excellent support staff. Please email CV to meadowhilldentalsurgery@soegateway.com.

Enthusiastic hygienist required at Swords Dental on a part-time basis. Well-established patient list with 45-minute appointments and high demand for service. Please send CVs to colinpatricklynam@hotmail.com.

Hygienists required for multidisciplinary, busy private practices. Modern, fully digital, caring supportive teams, part-time permanent positions available in Dublin 12, Dublin 7. Contact: alex@whitesmiledental.ie.

Part-time position available for dental hygienist. Busy book, well-equipped, dedicated hygiene room, super support team. Private and PRSI. Great remuneration for the right candidate. Apply with CV to niamh@drumcondravillagedental.ie.

Hygienist wanted for immediate start in busy, friendly general practice in Killorglin, Co. Kerry. Up to three days a week permanent. Full book to replace departing colleague. Email CV to timlynchbds@hotmail.com.

Rathfarnham Dental is looking for a hygienist. We are a busy, friendly practice! Brilliant support team in place. Excellent remuneration for the right person. Full/part-time and newly qualified considered. Email your CV to Sandra at info@rathfarnhamdental.com.

Deansgrange Dental Clinic is accepting applications for a part-time hygienist to join our existing award-winning, driven and fun team. Private and PRSI. Established book, fully computerised and a supportive team. Email careers@deansgrangedental.ie.

Part-time dental hygienist required for a busy, friendly, city centre practice to work in a specialist/general practice. Contact: kevingilmore100@gmail.com.

Part-time dental hygienist required to join a team of enthusiastic and supportive clinicians in a modern, high-tech dental practice. Good pay and conditions. Please email CV to manager@d18dentalrooms.ie.

KBM Dental is looking for a hygienist to join our team. We are a busy, friendly practice! Brilliant support team in place. One session per week to take over current book with possibility of increasing days. Call 01-495 7844 or email kbmdental.grange@gmail.com.

Hygienist required to join our city centre practice. Newly renovated, dedicated surgery. Single/multiple sessions available , to start ASAP due to high patient demand. Contact marycreddy@gmail.com.

We are looking for an experienced, warm and welcoming dental hygienist to join our patient-centred Maynooth team. Computer proficiency and experience working with EXACT/SOE (not essential, training will be provided). CVs to eve@boynedental.ie.

Part-time dental hygienist required for three days a week to join a warm, supportive and progressive dental team in north Cork. Established book and fully computerised. Please email your CV to ncdreception2@gmail.com.

Orthodontic therapists

Orthodontic therapist positions available at Dublin Orthodontics. Flexible working hours. State-of-the-art facilities with iTero and Trios scanners. Support from a team of experienced specialists, orthodontic therapists and support team. Contact elaine.hand@dublinorthodontics.ie.

PRACTICES FOR SALE/TO LET

Well-established practice, south Galway.,20 minutes from city. Modern, digital equipment, regular maintenance. Leasehold. Excellent opportunity for the right person in affluent area. Contact subgorty@gmail.com.

Galway City – Long-established two-surgery general practice with loyal clientele, sale or lease. Very low asking price as owner must retire soon. Contact galwaypractice1@gmail.com.

South Dublin orthodontic practice, superb location, strongly active three-surgery practice with room to expand. Modern, well-equipped, serviced, computerised/digitalised, very suitable for associate with a clear view. Transition phase negotiable. Reply in confidence with CV to niall@innovativedental.com.

Galway City – long-established, prime location, two surgeries, room to expand. Experienced loyal staff. Minimal medical card. Excellent profits. Very low rent. Growth potential high, as very busy. Priced to sell. Contact niall@innovativedental.com.

Limerick. Top-class, private, well-established, very busy practice. Modern/walkinable premises with good room to expand. Digitalised, computerised, excellent equipment. Good profits – low rent. Very strong new patient numbers. Principal available for transition. Contact niall@innovativedental.com.

Mayo. Progressive, dynamic, three surgeries, private/PRSI practice. Excellent, modern facilities. Separate decontamination. Loyal experienced staff. Active hygienist. Well equipped. Great location with ample parking. Very busy – no medical card. High profits. Contact niall@innovativedental.com.

Cork City. Well-established practice, integral part of community. High footfall. Contemporary/walkinable. Three surgeries with potential to expand. Separate decontamination area. Digitalised/computerised. Realistically priced. High new patient numbers. Excellent profits. Large ability to grow. Contact niall@innovativedental.com.

South east: Very busy, long-established private/PRSI practice. Leasehold – very low rent and overheads. Excellent location. Strong footfall. At present single surgery – room to expand. Excellent figures/profits. Large potential for growth. Contact niall@innovativedental.com.

Cork City. Well-established practice, huge patient base. High footfall. Located within a very busy and well established medical centre. Contact managingdirector@mdclinic.ie.

Modern clinic in Dublin 1 with two available equipped rooms for medical doctors with any specialty who are interested in renting and working together. Contact amar_al2005@yahoo.com.

EQUIPMENT FOR SALE

CEREC AC Bluecam Dental SW 3.85 Acquisition Unit CAD/CAM Scanner, CEREC MCXL Milling Unit, Ivoclar Programat CS Furnace. Excellent condition. €7,000. Contact info@deansgrangedental.ie.

MyRay Hyperion X5 "Air". Wall-mounted, panoramic radiograph. Purchased six years ago. Excellent condition. Price: €11,000. Contact info@dermadoc.ie.

Brand new Melag 41B autoclave for sale. Bought for €8,900, selling for €7,500. Please contact Aileen via text message on 085-119 9640 or email reception@crescentclinic.ie.

Kodak 8000 OPG for sale. All hardware, cabling and software supplied. €5,000 or nearest offer. Contact begleycaitriona@yahoo.ie.

EQUIPMENT WANTED

Laboratory equipment wanted, Dublin. Laboratory equipment required. Bench worktops, milling units, sintering, furnace, etc. All equipment considered. Contact niall@innovativedental.com.

Help in a time of need

Dr Mark Kelly is a GDP in Dublin, and President of the Irish Dental Benevolent Society.

What is your professional background?

I qualified from Trinity in 2000, and then did a year's vocational training. In 2006, I opened Shelbourne Dental in Dublin's Docklands with my friend and former classmate Dr Karl Cassidy. I've also worked as a part-time supervisor in the Dublin Dental School, but I'm currently taking a year out from that.

How did you first get involved with the IDA?

When I was in dental school, I got into web design. Ciara Murphy, who was the Chief Executive of the IDA at the time, approached me and asked me if I would help design a website for the IDA. I was also involved in the CPD Committee for a while, and served on the Editorial Board of the *Journal of the Irish Dental Association* for a number of years.

How did you get involved with the Irish Dental Benevolent Society?

I became a member of the Benevolent Society in 2006. I was Treasurer for five years and I'm currently in my second year as President. I really like the work and it's extremely rewarding because you really do feel like you're helping.

What services does the Benevolent Society offer?

The main aim of the Society is to provide financial assistance to dentists or their families when the need arises. We provide the basics for people, making sure that there's bread on the table, that they can pay their electricity bill. Then there are cases where we have bigger bills to pay, like helping the daughter or son of a dentist through college, or dentists that have passed away and have left their spouse in a difficult situation. The great thing about the Society is we have no overheads. Every cent that people donate goes to helping the grantees. Since Covid started, there has been a lot of pressure on some colleagues out there, so we're trying our very best and share out our resources as carefully as we can.

How can dentists contact the Society if they need help?

The best way for people to contact us is through our website – www.idbs.ie – or via email at info@idbs.ie, which we check every day.

It often won't be the dentist themselves that comes to us; it will be a colleague who might know that they are having a problem. Usually when we are approached, we'll ask the dentist to fill out a MABs form (available on our website). Based on that, the committee meets to discuss the case. No names are ever mentioned at meetings. The only people who know the identity of the person are the President and the Treasurer.

How can dentists donate to the Society?

There is a standing order form on our website, and we would hugely appreciate if people would consider committing to a regular donation, however small. The money that comes in to us goes straight to the people that need it. There's no wastage at all.

What has been the single biggest benefit of IDA membership for you?

Working as a dentist can be quite isolating, and I certainly see that first hand in dealing with cases in the Benevolent. Being in the IDA helps reduce the pressures and stresses of the job and that feeling of being on your own. It's great to know there's somebody there you can pick up a phone to, or you can talk to your colleagues at an IDA meeting about issues you're having.

How would you like to see the Association progress into the future?

More than ever before there's so much red tape and paperwork to the actual business of dentistry. From my point of view as a business owner and as a dentist, if the IDA can continue to promote and improve their offerings with webinars and online CPD, that will certainly have a huge appeal for people in practice. There's a lot that the IDA is doing right; there's very little I could fault. I've been a member since I became a dentist 21 years ago and I love the collegiality of it.

Mark lives in Terenure in Dublin with his wife Siobhan. They moved house recently so he's currently brushing up on his DIY skills. He enjoys landscape photography, and plays tennis in Rathgar. He loves to ski, and looks forward to hitting the slopes in February 2022, Covid permitting!

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*The APR (Annual Percentage Rate) included is an example only; all APR examples are based on a €10,000 loan over a period of 60 monthly repayments.
**The APRC (Annual Percentage Rate of Charge) included is an example only; all APRC examples are based on €200,000 over a period of 300 months. 1st legal charge will be required.

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